Salvador Notes

1925 - 1926

R. A. Stirton

Typed

Lake Olomega Departmento La Union
Altitude 200 ft. (by barometer)

July 28, 1925 - Clear - Warm.
7:00 P.M. I entered the jungles for the first time with a few mouse traps and six No. 0. Oneida jumps. The vegetation about Lake Olomega is not so thick but what one can go through it without cutting one's way. It was very warm in jungles today chiefly due to the absence a breeze there. I set five No. 0. Oneidas and about the same number of mouse traps at small holes under lava rocks and under tree stumps. Some of the tracks of larger mammals were seen but the identity was not certain. Two or three trails that ran horizontally with the hills were observed.

July 29, 1925 - Clear - Warm
The hills bordering Lake Olomega are steep with many lava rock boulder and thorn patches, thus traveling is very difficult. Along the edge of the lake is a path which is used ~~much~~ chiefly by domestic hogs and cattle. The only result of yesterdays set was an opossums foot. (Didelphis) This No. 0. trap was set in a hole on a hill side. Presumedly something had eaten the catch. Some natives ~~bought~~ shot a rabbit

while hunting last night. (Sylvilagus)

July 30, 1925 - clear - warm - 6 P.M. threatening rain. The traps that I set yesterday with the help of a native were gone this morning. A trap set by a small hole which ~~was~~ went down under a lava rock boulder contained a spiny-pocket mouse [(Hesperomys)]. This was in a shady part of the jungle not far from the lake. A trap baited with a Mexican Cormorat caught an opossum [(Didelphis mesamericana —)]. She had 13 young in her pouch which were about one fifth grown. Dr. Miller shot a spider-monkey (Ateles) and a small black bat. (Saccopteryx)

July 31, 1925 - ~~Clear~~ - Warm - Threatened rain in the afternoon. To-day I brought in all my traps from the mountain sides and formed my trap line along the lake. The trap that I caught the opossum in had a ~~dead~~ Black Vulture. The cormorat (bait) was well concealed in the brush but the vultures found their way to it. On my way along the trap line in the morning I passed one mouse trap by mistake. As I came back along the line about 11 A.M. I found a (spiny-pocket Mouse) [(Heteromys)] in the trap. The ants had all the hair nipped off. If I had looked at it in the morning it probably would have been ~~dead~~ O.K. The hole where I caught this specimen looked very

much like a cray-fish hole in that it was perfectly round and went straight down. The hole was about 1½ in. in diameter. I made three passages to the hole by placing three rocks near the hole. In each of these runs I set a mouse trap. The hole was about 20 ft. from the waters edge of the lake, under the shade of some low trees. The ground was perfectly dry and hard there. In a corn patch I noticed where something had been working on the ears that were leaning over and near the ground. The husks were chopped up rather fine and were scattered over the ground under the ear which had been robbed of its grain. I set nine mouse traps about the place and placed corn grains near ~~the~~ and on the traps.
Dr. Miller shot a squirrel (Sciurus) along ~~the~~ a ridge of one of the mountains. He shot it at close range because the jungle was too dense to let it get very far away. When he shot at a hawk a little later, down by the lake's edge, he heard a terrible clatter behind him and turned in time to see a large number of bats flying out of a hole at the base of a large tree. There was a hole farther up and he saw several go back into it. He shot one which was a small black form with two light stripes on its back. It was apparently the same species that he shot the day before.
(Saccopteryx)

August 1, 1925 - clear - windy - a nice day to work. Under a log not far from where I caught the first spiny-pocket mouse [Heteromys] I had the tail of another in one of my mouse traps. Another trap near by was sprung. All but two of the traps that I set in the corn patch were sprung. Perhaps this ill luck was due to new traps. I reset the traps and six more in a ditch near by where many dead leaves were piled up. In these leaves there appeared to be some small run ways. I climbed a large tree that had some hollows in it. In these holes and on some of the branches I saw some mammal droppings. They were black and about this large [redacted]. Tomorrow I intend to set some schuler traps there. Near the lake I saw a squirrel (Sciurus). By trying to let it get far enough away to be within proper range I let it get away in the dense foliage. As I was walking up a ravine watching for squirels I noticed a hollow stump which was about 15 ft. high. One side of the upper half was knocked off. When I peeked in I saw two little bats. They were like the ones Dr. Miller collected. They were hanging by their feet head down. One held his head out horizontally in front while the other's head was turned back under. They were hanging to the sides of the hollow trunk.

(Saccopteryx)

caught [illegible] specimen [illegible]

August 2, 1925 – Clear and during part of the day it was windy and nice to work. Two of the mouse traps that were set in the jungle near the lake had spiny-pocket mice (Heteromys) The ants had eaten one so badly that it was no good for a specimen. The ants seem to have a special fancy for chewing off the tail and dragging it away. Other parts that are first bothered are the ears, nose, and about the eyes and testes. One trap in the corn patch had a (Heteromys) but the ants had ito tail and most of his hair nipped off. The stomach content appeared to be ground kernals of fruit seeds and a starchy pulp from the corn grains that I scattered around the traps. In the pouch of one I found two grains of corn, and in another a small round fruit seed and a piece of wood.

The squirrels (Sciurus) seem to be very difficult to kill. I stood within 20 paces of one this morning and shot it with a 16 ga. shotgun with 7½ c. shot. although I searched carefully for the squirrel I could not find it. Mr. van Roosem had to shoot one five times with his 410 ga. shotgun before it came down. The squirrel that I shot at was along the edge of a corn patch in a dead tree. The two that Mr. van Roosen shot were in an open swampy forest where the trees were about 40 ft. high. The stomach content of these specimens was

fruit and vegetation pulp. The vegetation content appeared to be soft roots probably from some of the softer water or swamp plants.

In a hollow tree which was open at the bottom and also farther up so that the light showed through, I shot several little black bats. There were about 15 in the tree.

August 3, 1925 – Heavy fog in the morning. It cleared away about 7:30 A.M. Cloudy in the late afternoon.

I collected another gray-tailed squirrel (Sciurus) near the lake.

From the four two-lined bats that I collected with a shot pistol, I discovered on the wings of the ♂'s a little pouch or pocket. The female did not have the pouch.

In a canyon that led away from the lake I was met by a bunch of spider-monkeys (Ateles). Those in front appeared to be the younger forms. One that I collected proved to be a young ♂. My presence had apparently aroused their curiosity and they came to see what the intruder might be. Their calls soon brought the old folks to the scene. Through the tree tops they came chattering with excitement. They shook the twigs, hung by their tails, and made faces chattering all the time. When I fired they dashed off through the trees again; this time with out much to say. The stomach content was fruit seed and pulp.

August 4, 1925 — Weather as usual dry and warm. As there was nothing in the traps I spent the day exploring. I passed up a rocky heavily wooded canyon for about a mile, then climbed the canyon wall to the ridge that led up to the unlimbered region of a mountain. Here the grass was about knee high in most places and not very thick. All over the mountain side were round rocks ranging from the size of a hazel nut to large rounded and oblong boulders. Along these slopes paths, or what might be called paths, ran zigzag thus I was able to work my way up the mountain. I believe that deer stay in the jungle during the heat of the day and come out on these slopes to feed during the evening. Under some of the rocks I noticed fresh digging from little holes that led down under them. The holes were large enough to admit a Norway Rat. It was a very difficult trip.

I collected two more ~~bats~~ bats. Goldman refers to these as white-lined bats (Saccopteryx). As I was preparing these specimens I noticed a very small gland on ~~the~~ chin of the ♂ specimen. The small pouch on the wing had a peculiar odour. There is only a small remnant of this pouch in the ♀.

August 5, 1925 - Rather warm during the forenoon but in the afternoon it was windy. ~~and~~ Late during the day it was thundering in the distance.

In the corn patch I caught a spiny-pocket mouse, [Its stomach content consisted of ~~pea~~ corn grain pulp and round-worm parasites (Nematodes)?.

I discovered a colony of bats in a canyon. They are a little brown bat which I have not determined as yet. The canyon was quite shady at this place. The bats were clinging to the shaded underside of some huge boulders. They were easily frightened from their place of concealment for they began to fly and chirp when I was about twenty paces away. There were about 50 ~~bats~~ bats in the colony. Of the 9 specimens that I collected 8 were females. They were obviously all the same species.

August 6, 1925 - ~~Very~~ Warm during morning. Windy at noon and during the early part of the afternoon; raining late afternoon and evening.

Collected another female ~~monkey~~ monkey (Ateles). She was alone and was carrying a 40 m.m. embryo. I believe that the female Monkeys must leave the band as soon as they are ~~bred~~ bred.

I collected some more bats today. nothing in the traps.

August 7, 1925 – The jungles were quite refreshened from yesterdays rain. My clothing got wet while I was running my trap line. It rained again this evening.

Today I had another ♂ spiny-pocket mouse eaten by ants. This one I caught in the corn patch.

The bird men reported another large bunch of spider-monkeys from farther up the canyon.

A trap baited with cormorant caught an opossum (Didelphis m.) ♀ The mammary glands were active and the specimen was very poor. She was caught in open jungle near the lake.

An agouti (young) was caught in some open jungle in the canyon. The trap was set in a hole. The night before the trap was tripped. The animal did not resist very strenuously when taken from the trap. The hole appeared to be used frequently.

August 8, 1925 – Atmospheric conditions in the jungles were even cooler than yesterday. It rained again during the evening. The traps had two spiny-pocket mice again this morning. One was caught in the jungle not more than twenty feet from where I caught two others several days ago. The ants had discovered it and had eaten around its eyes. It had three grain

of corn and a soft kernel of some kind in its pouch. I have been baiting these traps by placing corn grains on the trap near the trip. The other specimen was caught in a hole in a ~~rock~~ small clay bank near the trail that lead the canyon. Here the jungle ~~is~~ was rather open and rocky. These traps were baited with corn. This mouse had 10 Nematodes in its stomach. They were approximately from 1 in. to 1½ in. long. My experience with these spiny-pocket mice has been many tripped traps with nothing in them. They are evidently very sly creatures. I found these spiny-pocket mice very hard to make up unless the ~~skin~~ ~~is~~ specimen had not been dead long. In some clay mud down in the canyon I saw some cat tracks which were probably (Felis pardalis ——). The trap near the lake where I caught my first Opossum (Didelphis mesamericana ——) had another smaller female. She measured 578 m.m. in length. In her pouch were six 14 m.m. young. Dr. Miller put them in formalin. The stomach of this specimen contained some yellow fruit and some mammal hair. Higher up on the canyon ridge I found a small group of monkeys ~~——~~ (Ateles) running themselves. They dashed off through the trees when I came ~~within~~ in sight. They have a ~~grunt~~ something like a pig's

August 9, 1925 - Today the conditions were as usual warm and clear in the morning and early afternoon and raining in the evening. The trap line was empty this morning. I shot two little brown bats in the canyon where I saw some a few days ago. The bird collectors reported a band of spider-monkeys (Ateles). By recently questioning the natives I find that the names of the two fruits found in the spider monkey's (Ateles) stomach is jocote which is yellow and as large as a blue plum and another nanze which is light yellow and just the size and shape of a cherry. The later is found thighe up the mountain sides on relatively small trees while the former is found near the lake and the trees that I have seen were tall.

August 10, 1925 - Weather conditions the same as yesterday. There were four spiny-pocket mice (Heteromys) in the traps this morning. Three of which were so badly eaten by ants that I only saved their skeletons. Three were caught in the jungle in holes under rocks and the third was caught in some dead leaves in a ditch near the corn patch. A trap in this same place caught a mouse that looked very much like (Evotomys) but the skin was so badly eaten by ants

that I was unable to determine its characters. I saved the skeleton or better what remained of it No. 10321. I went back to the hollow tree where I had collected most of my white-lined bats (Saccopteryx). There were no bats in the tree but a female was clinging to a near by tree. The bark of the tree was white and she showed up quite plainly. I shot her with a twenty two shot pistol. A small band of spider-monkeys (Ateles) dashed off through the trees ahead of me.

August 11, 1925 - Weather conditions the same as usual. The chief thing of importance to day was finding an arboreal mouse in a wren's nest (Thryophilus pleurosticus). I have not endeavored to classify the mouse. Its No. is 10323. As one of the fellows peeked into the nest the mouse ran out and would have run down the small tree to the ground had he not run quickly to the base of the tree. When I came up the little fellow was lying on the limb about two feet from the nest. Its eyes were large and black. This mouse very probably feeds on the eggs of this wren. This nest was about seven feet from the ground and was of a fine glassy structure. I shot the mouse with a shot pistol and saved the skin and skeleton.

August 12, 1925 - Cool all day no rain. Today we went up the mountain to the grass region. As I was climbing the steep hill side I saw a hoe (Odocoiles) running along one of the paths ~~which~~ horizontally along the ~~side~~ the steep side. For a while I thought it was coming straight to me but suddenly it saw me and dashed on over the hill with me following as rapidly as possible. Some time later as I was standing watching for a rock wren an armodillo came lumbering down toward me. Apparently it had not seen me for when I stepped over to pick it up as I would a turtle it dashed off through the rocks and grass out of sight before I could follow. The next time I shall shoot my armodillo then pick it up. The altitude where I saw these two mammals ~~was~~ is about 2000 ft.

August 13, 1925 - ~~Cool an~~ Warm in the morning but a nice breeze was blowing. Cloudy in the afternoon but no rain. Today we went upon the mountain again. Some mouse traps that I set by little holes under the rocks were not bothered, however one had some bird feathers in it. ~~The~~ ~~trap alone~~ The traps on my trap line ale set mostly in holes in the

jungle. These traps are very seldom bothered. I suppose they are old armodillo holes. We always meet spider monkeys when we go into the jungle for any length of time. This evening when I went back into the jungle to set some traps I slipped upon a small band. They didn't see me for several minutes. I could only see one monkey and he was apparently fanning at mosquitos which were buzzing about his face. My pleasure as an unobserved onlooker didn't last long for this monkey turned and saw me standing below. Instantly he started the familiar grunting which is so characteristic. It was several minutes before the whole band saw me. They would run along the horizontal branches sometimes in an erect posture supported by their tails and again on all fours. I noticed that usually had their long prehensile tail hooked over a branch. I presume this act was for any emergency that might happen. The speed with which these little acrobats could make through the tops was remarkable. Running along a limb they would come to the end and make a flying leap for the small branch of the next tree. Once they ~~would get~~ got their hold they were off again. Two male I noticed especially

stayed around until I left. Hanging by their tail and ~~feet~~ hands they would shake small branches with their hind feet until the leaves would come tumbling down. One of these males was young and the other ~~male~~ much older and larger. Frequently the younger would climb up to the older one and apparently caress him, then turn and fling angry threats at me and shake the branches. As I was climbing down a tree from fixing a bait an ~~a~~ arboreal ~~mou~~ mouse passed me going up. ~~They~~ There were several young clinging to her. It looked very much like the one I got out of a wren's nest two days ago. (Nyctomys)? This could have been Mammoor. 8/24

August 14, 1925 - Warm all day. Wind in the N.E. No rain. Late yesterday afternoon I took two dozen mouse traps and set them in a place along the edge of the corn patch where I have been trying to trap pocket mice. Most of the vegetation there was a heavy stemmed broad ~~leaved~~ leafed grass mixed with a few other weeds and cats claws shrubs or vines. I baited the traps by placing corn on the trap near the peddle. Then to get ahead of the ants I left camp as soon as I could see. I had two spiny pocket ~~mice~~ mice

and another species which was obviously the same No. 10323, which I found eaten up by ants. The traps that caught these two mice were about 75 feet apart. The ants had found the specimens in the traps but had not started to work. I got back from my trap line in time to go over to the swampy region with the others. There I found many signs of (Procyon lotor) and also many mice signs. Next week I expect to trap in that region.

August 15, 1925 – Clear and windy; cool. No rain. As I was walking up the canyon today I saw a large male Nasua narica — running down a slanting tree. I shot at him with No.5 shot for I was at close range. The first shot brought him to the ground with a slight growl and as he started off through the brush I pulled the trigger on the buck shot. This time he stopped with a louder growl. However I had to finish him with a 22 pistol. As well as I could observe at the time, he was solitary. The stomach content was mostly fruit, (Nanze) and some insects including one long horn beetle. The altitude at this place is about 900 ft. In a shady canyon. Large trees. I saw this animal about 9 A.M. As I was coming back down the canyon, about 11:30 A.M. at about

700 ft. altitude I met with a ~~band~~ bunch of 7 or 8 Nasua narica ——. When I first caught sight of them they were nosing around in the leaves, their tails straight up in the air. By the time I got within range they had strung out and were traveling rapidly through the jungle. Although I am sure they did not perceive my presence until I ~~fired~~. One specimen collected from this group ~~was~~ proved to be a young female. The stomach content was fruit, seeds (acorn like,), roots, and insects; the content was so finely ground and mixed that it was hard to identify. The male was very fat while the young female was in good condition.

August 16, 1925 - hazy and warm, threatened rain in the evening. There was nothing in the traps. In three different hollow trees up the canyon I discovered more white-lined bats (Saccopteryx). There were about 10 to 12 in each tree. By the rocks where I have been collecting ~~bats~~ Salvador brown bats I shot a (Saccopteryx) today.

August 17, 1925- Threatening rain in the morning, clear at noon, and raining in the evening. Today I collected another large male Nasua narica. He was in a tree inspecting two large nest when I first discovered him. I was surprised ~~with~~ at the agility with which he climbed about the tree. There was a great difference in color between the ~~two~~ ~~no~~ Nasuas that I have collected and especially between the two males. One is nearly black while the other is decidedly brown. I collected this specimen about 9:30 A.M. at 1100 feet altitude. The stomach content was mostly fruit (nanze). All the Nasuas that I have collected have had Nematodes in their stomach. My mouse traps in the grass along the edge of the corn patch had another wooly mouse. The ants had eaten it so badly that I made a skeleton of it. Its stomach contained ground corn. One of my large traps which was baited with cotmorant had a small male opossum (Didelphis mesamericana ——). The bait ~~was~~ had been hanging by a string from a tree. The opossum apparently tried to crawl down the string for the string was broken and the bait was lying near one of the traps. The most interesting thing that happened to-day was the shooting of a Tayra (Tayra barbara ——)

by A. J. van Rossem while collecting birds. The animal was found running along ~~with~~ growling. He was shot with a 410 ga. shotgun. His stomach contained fruit (jocote) and some mammal hair (very little).

August 18, 1925 - cool today. I caught another small female opossum (Didelphis mesamericana ——) in ~~the~~ a canyon in a hole under a rock at 1100 ft. altitude. The place smelled strongly of skunk. Near this place I saw a fine buck (Odocoiles) he had been down to the canyon possibly to get a drink. I shot at him with buck shot but he was too far away for my 16 ga. shotgun. He tore off through the woods at a rapid pace. Later in the evening a native brought a large Agouti (Dasyprocta). It was shot on a ridge near camp. Alt. 350 ft. There were two, this larger male and a smaller. ~~one female~~. The smaller one escaped before he could reload. The place was quite brushy. The stomach contained fruit (nanze & coll).

August 19, 1925 - Normal day. Foggy in Mts. in morning. Rained in evening. I did no field work today, but worked on salted hides. The stomach of a (Urubatinga urubatinga) hawk contained the remains of a (Nyctomys) ~~a~~ vesper rat. The hawk was collected in dense jungle by Dr. L. Miller.

August 20, 1925 - Clear warm day, no rain. Today I brought the traps down from the canyon that leads up to the mountain. On one of the traps set on a trail on the mountain side I had the remains of a (Conepatus). The vultures had frighten me to it. No bait was used. The trap was fastened to a solitary manzo tree which was close to the little path that wound its way along that steep slope. The ground in this region is thickly dotted with lava rocks and a wild prairie grass.

August 21, 1925 - Warm in the morning and afternoon. Rained in the evening. Today I took the traps over to the marshy region where the San Miguel river flows into Lake Olomega. On the higher ground there are tall trees very free from undergrowth and brush beneath. At many places one can see for several hundred yards ahead. Dotted here and there under the trees are coyol-palms which have a blue fruit ~~which~~ which resembles a bunch of grapes very much when ripe. I have seen the varigated squirrels (Sciurus) feeding on this fruit quite frequently. Also I have shot two mice (probably Orozymus) from their nests in these palms. Out nearer the lake on in the swamps that lead away from it is lower ground where a thick ~~vegetation~~ thorny vegetation grows. This cats claw like brush is called mimosa. Here I found many mice nests in the brush and shot

the mice with a shot pistol. Sometimes I found the mice in old bird nests. These mice are probably Orozymus. In the canal like swamps leading away from the lake I saw raccoon (Procyon) tracks.

August 22, 1925 - A very pleasant day. Last night it rained so hard that most of my mouse traps were tripped. I shot a variegated Squirrel which was near some coll-palms.

August 23, 1925 - Warm in the morning. Mouse traps that were set near the water's edge of a swamp which leads a winding course back through the open forest had three mice (Oryzomys). The traps were set under mimosa brush some of which was dead and formed a trashy brush up through which the green brush was growing. Under the mimosa on the other side of the forest were conditions were similar except that the swamp wasn't there, I caught two more Oryzomys and a Wolly mouse. The ants had eaten the two Oryzomys and had started on the Wolly mouse. These traps were baited with grains of corn. In the open swamp forest where the trees averaged about 60-70 ft. high I shot an Anteater (Tamandura tetradactyla ——). This specimen was located on a horizontal limb about 55 ft from the ground. She was lying perfectly motionless on

branch where she was very likely feeding on termites, as I noticed there was a run up the tree. I had to shoot her with heavy shot as No. 5's wouldn't bring her down. The second shot paralized her hind parts so she proceeded on out toward the end of the limb in a hand over hand process with her well equiped front feet where she came crashing to the ground. Her front limbs were very heavily [redacted] muscled These appendages and the much enlarged claws are possibly used for tearing into termite nests and into dead wood for ants. Both termites and ants were found in her stomach. Her feet were very heavily padded. The forest [redacted] where she was collected was very open. All the trees were tall and there was no under brush. The ground is thinly covered with a grass which is about knee high. However not far away is the mimosa brush (catsclaw) which lines the banks of a lagoon that was formerly the river bed.

August 24, 1925 – Very warm today. No rain. As we were not able to get into the field very early today I had seven mice [redacted] (Oryzomys) [redacted] destroyed by ants. One Wolly mouse was not found. These traps were set in the trash under the mimosa bush and baited with grains of corn.

August 25, 1925- Cool morning and early afternoon; warm wind blowing in the evening. My mouse traps under the mimosa brush had six mice today. Five were destroyeded. One was a wooly mouse and the others were Oryzomys. The ants seem to be every where even down to the waters edge of a lagoon.

August 26, 1925- Very warm all day. The mouse traps had six mice, two were good specimens and the others were destroyed by ants. Although we got into the field about 8 A.M. we were too late. The ants seem to live in relatively small colonies all though the mimosa-brush. I have frequently placed a trap on these dens and found them carrying off my bait (Corn) in a few minites. Our native assistant shot a nine-banded armodillo (Dasypus novemcinctus ——) in the open forest under large trees. This specimen was taken in the same swampy region that I have been collecting Oryzomys, and in the same type of place that I killed the anteater (Tamandura tetradactyla ——). There were grubs and other beetle larvae, and dung beetles in his stomach. The natives say that the armodilla meat is very palatable.

August 27, 1925- Cloudy and threatening rain nearly all day. No rain. Today we got into the field an hour and one half after day break. Indications from the trap line showed that we were about the same length

of time too late. I found several Oryzomys nests in thorny bushes covered with vines. Sometimes they were in little thorny trees which were covered with vines. The nests were usually constructed on the outside with leaves or other coarse material while the inside was lined with fine dry grass. I shot several mice with my 22 shot pistol by poking the nest with a stick and shooting the mice as they came out. Being suddenly aroused from their nap the mice usually come out of their nest and stop rather dazzled, and are easily shot.

August 28, 1925 - Cool; a nice day to work. No rain. We were in the field this morning before day-break. I shot only one Oryzomus. by the ants. In a open space in the mimosa-brush in some heavy stemmed grass I caught another (Sigmodon hispidus —) Cotton rat. The smaller specimens that I have been calling wooly mice are very likely immature Sigmodons. Our native assistant saw a deer (Odocoiles) in the low land forest near the San Miguel river; a swampy forest region.

August 29, 1925 - Drying wind blowing all day. Many of the mouse traps were sprung this morning. The cause of this is probably (Sigmodon hispidus —) cotton rats which are too large

for the small mouse traps to hold. Next week I shall set some large snap traps. I shot two Oryzomys from their nests in the mimosa brush and vines. The nests were of leaves and lined with fine dead grass. A cotton rat was sitting on a horizontal limb in the mimosa-brush. She was carrying four 43 m.m. embryos. As I was working my way through the vines and brush I suddenly came upon two large mammals. They were obviously deer but I didn't see them very plainly before they dashed off.

August 30, 1925 - Cool day. Today we went up the canyon south of the lake. In the canyon where the bats are found under the large rocks I found a new species. The Salvador brown bat were not as thick as they were previously. Perhaps due to the continuous collecting there they have changed their lodging quarters. This new species 10399 was shot in a very dark corner of the rocks. For shape of tragus see serial No. 10399. I saw one female ~~monkey~~ carrying a young and a male and female farther up the canyon. I collected the male. His stomach content was jocotes.

August 31, 1925 - very warm day. Mosquitos very bad, angry if you please, and the little blacks more so. Collected a bat, a Gray-tailed squirrel, and an Oryzomys and hurried home.

September 1, 1925 - very warm, Rained in the evening. Today I collected a male Spider monkey (Ateles). He was alone in rather dense jungles. His stomach contained red berries. I saw five Gray-tailed squirrels (Sciurus) but they were in dense jungles and at too close range to shoot. In the evening just before it rained I went out along the lake's edge in the boat and shot two Mastiff bats. They were flying very fast. Stomachs contained insects.

September 2, 1925 - cool day. I shot three Salvador brown bats in the canyon. There were only five or six bats around the rocks. In the evening we shot two more Mastiff bats along the lake's edge. They were flying high in the early evening but came down nearer to the water later in the evening. We heard small bats among the trees probably Saccopteryx. The four Mastiff bats which referred to in my serial numbers as red mastiff bat, black mastiff bat, and brown mastiff bat, have the same markings except for color. The one female brown mastiff bat is smaller than the males. In the earlier part of the evening I first see these bats flying over the trees near the top of a ridge east of the lake, but later they come down within gun range.

September 3, 1925- warm day; rained in the evening. A trap set near a small round hole which led back under a huge boulder caught a spiny-pocket mouse. Near was an jocote tree and the seeds were lying on the ground. It is probable that the spiny-pocket mice feed on these seeds, for the stone is covered with a soft hull. In the swampy forest region near the San Miguel river I shot two two-lined bats and an Olomega leaf-nosed bat. They were discovered on a big white mangrove tree. Near the base of the tree there was a decayed portion which extended up for nearly fifteen feet. As I came up the two two-lined bats flew out and lodged on the other side of the tree. I saw the Olomega leaf-nosed bat flutter in a dark corner of the decayed crevice; by looking closely I discovered him and shot him with the shot pistol. Then I collected the other specimens. This vicinity was a very open forest jungle with many large trees. A lagoon was within thirty five of the tree where I collected the bats.

September 4, 1925- cool day; threatening rain in evening. I caught a spiny-pocket mouse by a hole in a small stump directly under the jocote tree that I spoke of yesterday. By a large rock I caught a mouse that looked some what like an Oryzomys. The stomach content of both mice proved

to be grain and seed pulp. The grain is probably from my trap bait and the seed pulp is pobably the jocote stone or kernals. In some water lillies and cats claw (mimosa-brush) I caught a cotton rat (Sigmodon hispidus —). The trap cracked his skull so I threw him away.

September 5, 1925 — warm and windy. Heavy rain in the evening and night. At the mouth of a canyon on the south side of Lake Olomega not far from our camp is a ~~[illegible]~~ three acre ~~[illegible]~~ brush and grass patch undisturbed by cultivation. The patch is bordered by the lake on the north side, a corn patch on the south, and on the east and west by sub-tropical jungles ~~[illegible]~~ slopes or ridges which gradually draw closer together farther up to form ~~[illegible]~~ a rocky jungle canyon. Along the lakes edge the ~~water~~ hyacinths ~~[illegible]~~, carried across the lake from the swampy region by storms, ~~[illegible]~~ have started a growth which is twenty to thirty feet wide in places. The water is knee deep in the hyacinths ~~[illegible]~~ on the outer edge and gradually decreases in depth until on the inner edge there is only a mucky substance through which the hyacinths ~~[illegible]~~ roots ramify. Just back of the water hyacinths ~~[illegible]~~ and sometimes mixed with them is long rough bladed grass

of a yellowish green color. This grass is found in patches ~~in~~ in many places the ~~water lilies~~ hyacinths extend back to the cats claw (mimosa-brush) which form a nearly impassable barrier along the lakes edge. Annual vines in many places have climbed over the cats-claw and smothered it from the sunlight. Except for small trees or shrubs covered with vines and an occasional large tree the remainder of the patch is ~~grass~~ grown up with a heavy stemmed blue bladed grass which has been allowed to pile up year after year. In a ~~dry~~ muddy ~~bed~~ run which led from the ~~water lilies~~ hyacinths into the ~~mimosa~~ cats claw I caught a ~~rat~~ cotton-(—x—) rat (Sigmodon hispidus —). I caught (10423) a blue-tailed rat in a trap at the edge of the sub-tropical jungle. The trap ~~was~~ had been set along the base of a large boulder, where I (10415) caught a spiny-pocket mouse two days before. Its stomach contained some jocote seed and fruit pulp and green pulp. I caught another blue-tailed (10422) rat ~~also~~ in the jungles under a rock where the ridge south of our camp comes down and forms a rocky shore along the part of the lake. There was another jocote tree and I found many of the seeds carried back under the rocks. Its stomach contained a brown and

white seed pulp.

September 6, 1925 - Warm day, especially close in the afternoon. Threatening rain in the evening; may rain tonight. In the heavy stemmed blue bladed grass I caught a cotton (10424) rat (Sigmodon hispidus -) in one of the large snap traps. The trap was set under some grass that was held up by a few slender shrubs. She carried five 23 m.m. embryos. Her stomach contained green plant fibers. (10426) I took a large Oryzomys from a trap set in a run on the mucky soil in the grass among the ~~water lilies~~ hyacinths. In another trap set up in the grass about two feet from the water I (10425) caught a smaller Oryzomys. The trap crushed its skull but I saved all I could as well as the skeleton. On the other side of the lake in a hole under a stone wall about three hundred yards from the San Miguel (10427) river I caught an opossum (Metachirus). The wall leads up a small slope to a stock shed. Around the wall was much grass and weeds, and it was about one hundred feet to the edge of the jungles. Several nights I formed a No. 1. jump trap, which I had set in the hole, spring. Yesterday I set three No. 1's in a Y shape and caught the opossum. The specimen was very pugnacious. She carried six young in her pouch which measured 85 m.m. in length. In the evening I (10428) shot another black mastiff bat along the

lakes edge near camp. Its stomach contained insect pulp. A native
(10429) brought me a lion-cat. We shot it on a ridge (Alt. 350 ft.) in the jungles east of camp. The native said there were two but the other escaped. This mammal had a prehensil tail.

September 7, 1925- very warm day; rained during the night. A trap set by a little round hole under a small rock had a female spiny-pocket
(10430) mouse. I caught two other specimens of spiny-pocket mice from the same hole about two weeks ago. Van
(10431) shot a gray-tailed squirrel in the jungles near a corn patch. Its stomach contained jocote fruit and nuts. These mastiff bats are the swiftest bats I ever saw. I missed two shots again tonight.

September 8, 1925- very warm day; rained all night. I caught a
(10432) Sigmodon in the blue stemmed grass. The specimen had apparently been caught early in the evening before for it had started to deteriorate. The stomach content could not be determined. Along the rocky lake shore in the edge of the
(10433) jungles I caught a Peromyscus. The trap was baited with tankage.

September 9, 1925- Under the rocks on the lake shore in the edge of the jungles I caught two spiny-pocket
(10434) & (10435) mice. These traps were baited with shelled corn which was laid on the trap near the beddle. The mice were caught in the same type of places

and not more than sixty feet from the places where I caught (10422) two blue-tailed (10442) rats and two Peromyscus. In the stomach of the peromyscus that I caught today (10433) + (10436) I found (10436) some brown seed pulp and some material that looked very much like insect remains. This location that I have been speaking of as a rocky lake shore and in the edge of the jungles is on the south east side of the lake near our camp. The lake's shore is at the base of a rocky jungled ridge. Just above the high water line and a cow trail that follows the edge of the jungle I set my traps in crevices, under protected shelves of the rocks, and in places where small holes led down under the rocks. Some of the rocks are loose and some are half buried. On the north side of the lake near the lagoons of the San Miguel in a small grove of coffol palms I (10437) caught an opossum (Didelphis). This trap which was set in a hole that led down under the rocks was tripped for three consecutive mornings. When I set three traps there in a V shape I caught the specimen. I shot another (10438) female brown mastiff bat near camp at dusk.

September 10, 1925 – I caught (10439) another spiny-pocket mouse by a small round hole that led nearly straight down. The water from the lake spread over the grassy patch at the south side of the lake so I had to remove my traps from (10441) that place. I shot another male brown mastiff bat.

September 11, 1925- On the rocky lake shore in the edge of the
(10442) jungles I caught a female blue-tailed rat
(10444) and a spiny-pocket mouse.

September 12, 1925- At the east end of Lake Olomega is a large small island which is about one acre. There is one natives hut on the island. Part of the place is a ripened corn patch and in other places where there are too many rocks for cultivation there is tall bunch grass while around the lakes edge there are some large trees and much shrubery. Today
(10446 + 10448) I caught two Sigmodons in the tall grass. No. 10448 was caught in a steel trap in the daytime while I was setting the other traps. These cotton rats seem to be quite abundant on the island. One
(10447) of the natives brought me a white-toed blue rat which they caught in their hut. The specimen is apparently quite young. During the afternoon a boy came in and said he saw an opossum that morning while chopping wood. He said it was in a tree near camp so I went with
(10449) him and located a porcupine in a tree that was full of vines. She was lying on a horizontal limb close to some heavy vines. During the evening a native brought in another Porcupine which he shot
(10450) just over the ridge from where I shot the female.

September 13, 1925- clear day no rain. Today I caught eleven Sigmodons in the tall grass and corn patch on the small island. The stomach content of these specimens was green plant fibers and corn pulp. Six of the specimens were too badly eaten by the ants to save. In a trap set by the roots of a large tree near the lake I caught another white-toed blue rat but unfortunately some prowling cat ate it half up. The specimen was quite large. H.F. 37, T. 193. Hind foot - heel, purplish flesh; toes and pads pale purpleish flesh. Under side of toes with segmented effect as in Sigmodon. Color - bluish slaty. Dorsally darker with grayish hairs throughout. Ventrally lighter. More gray hairs on sides and flanks than any other place. One toe heavily tipped with white and the other slightly tipped with white. Tail dark with many short hairs.

September 14, 1925 - Warm day; heavy rain during the night. The day was spent with Mr. Taylor up on the mountains south of camp. I saw a deer (doe) (Odocoiles) which was running [redacted] along a horizontal path about half way up one of the slopes.

9/15/1925

~~November~~ September 15-19, 1925 were days that I spent at Olomega collecting on the small island and shooting bats in the evening while Van was in San Salvador.
(10456) At this time another Porcupine was shot by a native and
(10461) brought to me. The Brown mouse which I caught at this time I havn't been able to identify. The truth is I havn't tried. On the island I caught my first White toed blue rat (Probably Rosi Rat)

September, 20-23 were spent going to Divisadero

9/23/25

Department Morazan, Divisadero Salvador

September 23, 1925 - Warm during the day, and rained nearly all night. Our first day in the field at Divisadero was west of the village. We took mules and I rode about a mile and one half over winding rocky trails. The vegetation in this region is mostly third growth carbón, probably a species of mimosa, the older trees had been cut for fuel for the mines at Divisadero. At the base of a small ridge we entered a short mine tunnel which had been deserted for some time. As soon as we could no longer see light behind us we commenced to see bats. And the farther in we went the more bats we saw. Likely we drove them ahead of us for the tunnel was only four feet wide and six feet high. The place seemed to be fairly alive with bats. In places they nearly put the little miners lamps out. Mr. van Rossem knocked them down with his hat faster than I could pick them up. As near as I can judge now ~~those were~~ from the collection I have six species: Grizzley bat (10472), Hairy-legged bat (10471), Grayish leaf-nosed bat, (10473-10474-10477-10483-10489) Yellow leaf-nosed bat (10475-10476-10478-10479-10484)) Intermembrane tailed leaf-nosed bat (10488), and Brown leaf-nosed bat (10480-10481-10482-10484-10485-10486-10487-10490-10491-10492) Monte Cristo mine The Brown leaf-nosed bats seemed most common, much more work must be done there.

(10470) Our moso killed a [redacted] cotton-tail in a small grassy patch near town.

September 24, 1925 - very rainy. worked on bats collected day before.

September 25, 1925 - cloudy. Heavy rain about noon and some rain in the after noon. Today we took the mules and followed the brushy trails to the Encuentros mine which is about 3 mi. west of Divisadero on the [redacted] west bank of the [redacted] Rio Seco river which temptics into the Gothera river at Encuentros. Our lights didn't last long but we knocked down three bats which I called Grand pa [redacted] bats. (10493-10494-10495). The opening to this old mine runs in at right angles to the vein, which was quite wide and high. There appeard to be thousands of bats flying back and forth. These bats have a very peculiar face. when the mouth is opened wide the fringe of skin around its edge and the long hairs on the upper lip form a much wider opening than the mouth ordainarily would. Another peculiar structure is the bald spot on the head. In fresh specimens this was pinkish flesh in coloration. The wings and inter caudal membrane formed into a basket effect. This is probably of much aid in catching moths.

September 26, 1925 - warm morning. Rained in the afternoon and evening. About 8 A.M. we took flash lights and mine lamps and went down to the Carolina mine. In one short tunnel we caught 12 female ~~Brown~~ Brown leaf-nosed bats. Nearly every one of these ~~bats~~ bats carried embryos. Some of the females that were kept in captivity in a trunk bore their young. In another short tunnel we found the Salvador brownbats. These look quite different from the specimens collected at Olomega. These are much more blueish in comparison to the brownish color of the others. In specimens from both places I noticed that the edge of the membrane, between the foot and the first finger, is white. These bats were found in a short tunnel and only back out of the sunlight, not back where it was dark. Mr. Van Rossem shot several on the shady side of a rocky cliff on a mountain ¼ mi. N.E. of Divisadero. They were all females.

September 27, 1925 ~~----~~ The day was spent working up specimens caught the day before.

September 28, 1925- Forenoon very warm; rained some during the afternoon and evening. Again we invaded the Monte Cristo tunnel with its short lateral tunnels at frequent intervals. Not far from the mouth of the tunnel the ceiling or arch is reenforced by poles laid close together on heavy crosspieces which are supported by heavier uprights. Among the closely laid poles we saw a blue-tailed rat which escaped to safer quarters before it could be shot with (10526) the shot pistol. However one farther back in the tunnel was dazed by my bright flash light and was shot from a small rock ledge before it knew what all the fuss was about. Three of us walked back through the narrow tunnel with a mine lamp and my "flash"; thus we drove the bats back to the face knocking several down with our hats as they attempted to pass, and catching others in a butterfly net. As we neared the face of the mine the bats became more numerous; the continuous beating of their wings increasing almost to a roar. Once or twice I dashed forward with the butterfly net about two inches from the ceiling and returned with it half full of bats, while the others were knocking them down with their hats with strokes in rapid succession. The greater number of this catch was Brown leaf-nosed bats; next in numbers were the Yellow leaf-nosed bats. The rarety of the catch (10521) was what I called Franz Joseph bat, due to the

whiskers on his upper lips. On the way
(10522) out I shot a Hairy-legged bat. This species as well as the Grizzley bat are undoubtedly Vampires for they had blood in their
(10522) stomachs. The Hairy-legged bat was hanging head down on nearly vertical rock wall, but much of the weight must have been supported by the forearms which were braced out in front on either side. After having a short rest in the open and Mr. van Rossem having gone off after birds I went back into the tunnel with my shot pistol to look for more Vampires. Having noticed more of the larger bats near the mouth of the tunnel I resolved to search the short laterals very carefully. About eighty or ninety feet from the outer opening I discovered one of the laterals that had caved in leaving an opening just big enough to allow me to crawl through. Once inside I saw that the tunnel extended upward at an angle of nearly forty five degrees. Several four inch poles supported the ceiling. There were many bats clinging to the rocks and dashing hither and thither most of which were Brown leaf-nosed bats, Yellow leaf-nosed bats, and Gray-leaf-nosed bats. (several of the later were collected on the first trip). I looked the place over carefully throwing the bright ray of the "flash" into every possible nitch. At last up near the top by a short thick chunk or pole which was lying crossways of the foot wall I saw something move which looked much like a bat

but resembled a miniature monkey more. It disappeared behind the log immediately. I climbed up the incline by carefully picking my footing at last I was close enough to see more distinctly and also within range with my shot pistol. Sure enough there were the Grizzley bats dodging into the shadows ~~dog~~ trying their best to evade the light. They hopped about like so many monkeys using their forearm as a quite efficient front leg. I shot one from a nearly veitical rock wall where it supported itself by the forearms out in front, another was shot on a horizontal rockshelf and the other two were shot near the log or chunk.

September 29, 1925 - clear morning rain in afternoon and evening. Worked on bats collected day before.

September 30, 1925 - Weather conditions the same - worked on bats which were held in captivity. W. van Rossem reported a doe and a faun which he saw in the edge of the carbon forest. Our mess shot (10547) (10548) two more cottontails at the edge of a grassy pasture through which a stream ran. He said they were quite common there.

October 1, 1925 - much rain today - I discovered many of the little Salvador brown bats in some old boilers in the old ore plant at Divisadero. The boilers were built in a brick furnace. The bricks over the back end of two of these structures had fallen in and thus they were less desirable for bat; but the other two were swarming with the little "skreeking" fellows. I shot several from where they were clinging to the surface of the brick wall and boiler.

October 2, 1925 - no rain today - With some help today I succeeded in catching over one hundred Salvador brown bats in a bed net. I drove all the bats into one furnace by going into the others with my "flash" and brushing about with my hat until they left then I shut the furnace doors. Once they were all under one boiler the other fellows held the net like a large bag in front of the door while I went in and drove them out. They seemed so utterly surprised when they hit the net that they remained there only a few flying back into the furnace again. These little bats are very peculiar in many of their habits. By more closely watching I find that these bats are refered to as

Dog bats. It is quite obvious that this name has been derived from their dog like habit of ~~[illegible]~~ laying back their ears and pervously backing away when one approaches. Their relatively large black eyes are quite prominant. Thus hanging by their feet, braced with their forearm, their ears back, and the hinder part of their body pressed closely against the rock or wall to which they are clinging they are not nearly so conspicuous as a bat hanging head down. I should think a better name would be puppy bats or fox terrier bat. I placed small pieces of cotton in the sacs on the membrane to make them stand out more prominant. These little sacs are quite obviously glands for when I caught males (only males have the sacs on the female they are rudimentary) the sac and membrane near it were moistened, but the sac was so small I could detect no odour. When flying these bats made a peculiar metalic sound like one that could be made by a loosely threaded cable of wires of some rich metalic substance or of freshly cut iron. I was unable to discover how the sound was made. I believe the net system is a very effecient way of taking bats, for after catching a large bunch I turned them loose in a closed room and picked the specimens I wanted as well as studied their habits. At dusk I turned them loose.

October 3, 1925- clear day rained at night- We raided Monte Cristo again with the large net. We caught one Hairy-legged bat, four (10570) Grizzley bats, several Yellow and Brown leaf-nosed (10567) bats, and one which I called Golden leaf-nosed bat. Van took pictures of ~~several~~ of five bat faces for me. (10567) (10565) (10569) (10570) (10571). The bats that I had in the room for to work on tomorrow escaped through a hole in a window.

October 4, 1925- I spent the day looking for ~~an~~ mammal signs around a rocky cliff where I expect to put out a trap line.

October 5, 1925- clear during the fore noon but threatened rain during the afternoon.- We ~~[illegible]~~ departed for Monte Mayor which is four hours mule back ride N.E. of Divisadero. Monte Mayor is an old mine ~~[illegible]~~ on the bank of a river at the foot of a mountain range. During the afternoon I followed the course of a ~~river~~ stream which comes tumbling down over the ~~river~~ rocks in many falls and empties into the river that flows by Monte Mayor, while looking for signs of large mammals near the water's edge I saw some bats shift farther into the shade of a large rock. I shot two which proved to be Brown leaf-nosed bats. However they seemed to have a hoary appearance which I had not noticed on the same bats at Divisadero. ~~[illegible]~~ One a female ~~was~~ carrying a clinging young. The ants ate these specimens.

October 6, 1925 - Another clear day rained during the evening. - Going by mule back and walking in many place we went over the mountain range north of Monte Mayor to the Jimenez tunnels on Carrizal hill. The first of these tunnels was at the foot of a steep slope and which was covered with dense third growth jungle. The floor of the tunnel was covered with about twelve inches of water, and was about one hundred to one hundred and twenty feet long. This place seemed to be a home for the Grizzley bats (Desmodus rotundus -). There were about fifteen of these bats in the tunnel and one Brown leaf-nosed bat (~~Glossophaga~~). We caught them by holding the net at the opening and driving them into it with by taking a mining lamp and going to the face of the tunnel and driving them ahead. The second tunnel was farther down the canyon but more in the open except that the opening was covered up with large weeds. There was water in this tunnel but not so deep. There were more bats here than in the other tunnel but there was only one Grizzley bat (Desmodus rotundus —) while the place alive with Brown leaf-nosed bats (~~Phyllostoma~~ —) also there was one Gray leaf-nosed bat.

October 7, 1925 — sick
October 8, 1925 - clear in the morning but rained in the afternoon. I put up some bats that we collected at Jimeto mine. Still feeling "punk."

October 9, 1925 - clear day; rained at night. We left for San Sabastin which is about four hours mule back ride nearly due east of Divisadero, and about the same distance S.E. of Monte Mayor. As I was feeling some better during the afternoon I got a guide and went into one of the old mine tunnels. Near the opening I saw many Salvador brown bats. These little fellows were clinging to the rock walls and poles along the ceiling or roof of the tunnel. Farther back there were hundreds of Brown leaf-nosed bats, Yellow leaf-nosed bats, and Gray leaf-nosed bats. Half grown young were clinging to many of the females. As I was not feeling well enough to make up specimens I didn't collect any. Where the tunnel had caved in and blocked the passage I saw many Raccoon tracks in the mud. My guide said the Raccoons eat corn, fish, and chickens.

October - 10, 1925 -
Back to Divisadero. No rain

October 11, 1925- No rain. I took some large snap rat traps and set them in a tunnel in the Carolina mine at Divisadero and baited them with tankage. I set two traps behind a bile of wood or stakes and had passed on some distance when I heard one of the traps snap. On returning I discovered a (10579) white toed blue rat in my trap. I (10467) caught one of these rats on the small island at Lake Olomega. The natives there claim they are in their houses. These rats must be the Roof rat but I have no description available.

October 12, 1925- No rain. The traps in the mine had two half grown White-toed blue rats. I didnt put them up for both had their skulls broken and the ants had beaten me to them. One was caught under the pile of wood where I caught an adult yesterday and the other was caught by a path or trail along the wall. Some barn owl pellets which I collected yesterday contained many skulls and bones of what I took to be White-toed blue rats and a small Carnivorous mammal probably a ~~weasel~~ weasel. I could smell skunk scent on some of the barn owls that Van shot from these shafts.

October 13, - 1925 - No rain. I started a trap line on a rocky steep cliffed mountain 3/4 mi. N.E. of Divisadero. The altitude on the mountain ranges from 800 feet at my lowest trap to 1200 feet at the top. In many places on the lower slope the brush has been cleared away and corn has been planted. Even where there is brushy vegetation or small trees it is third or fourth growth. This type of ground extends up to 1000 feet then the shaggy rock cliffs reach upward to an average of about 100 feet where there is some tall grass which is entirely smothered out in most places by dense low brush. Rooted into the cracks of the rocky cliff are many scrub trees, some which extend out nearly horizontally are favorites frequented by black vultures, turkey vultures and an occasional ravin. I caught a
(10581) Sigmodon in a large snap trap baited with corn. The trap was set in a run along a brush fence. This was in a very brushy place near a corn patch. A little farther up the mountain I caught a
(10580) Liomys in a large snap trap baited with corn. This trap was set at the opening of a small round hole which ran horizontally into little banks of red soil. Another trap in a similar set had a tail of probably the same species.

October 14, 1925 – no rain.

(10582) I caught an Oryzomys in a large snap rat trap set along the edge of a little red bank, which was about a foot high. This place was under heavy brush and small trees near a corn patch at an elevation of 1000 feet. This female specimen was carrying three 16 m.m. embryos. The ants had eaten her nose pretty badly and also one of her feet. Not far from this place I caught a (10583) Sigmodon by a brush fence. The trap was baited with corn and set in a place where it looked like these rats had been using as a run. At an elevation of 1100 feet on up the mountain side (10584) I caught another Sigmodon under steep lava rock cliff. This female was carrying two-18 m.m. embryos.

October 15, 1925 – Rained .07 during the night. The traps on the mountain side had nothing. One of the traps in the mine had an immature male (10585) Opossum. His stomach content consisted of insect remains which he probably caught by digging under boards and among the ~~piles~~ piles of wood in the mine tunnel. He was very poor.

October 16, 1925 - Threatened rain during the late afternoon. One of my traps set in the dense brush on the mountain side at an altitude of 900 feet by some small holes (10586) had a tailless Liomys. Had I not arrived when I did the ants would have ruined it for they had commenced their "dirty" work. At this same place several days ago I had the tail of a Liomys, probably this mouse. At an altitude of 900 feet in an open space at the base of a steep rocky cliff is a patch of heavy stemmed broad leafed plants. Under these plants are many burrows. It looks as if some mammal was feeding on the roots. I caught a Liomys at one of (10587) these burrows but the ants beat me to it. The brush fence by which I have set some traps and made several good catches, leads up the hill side some distance and terminates where a tree is holding a small red bank from eroding by means of its roots. A trap set by a hole leading back under the roots of (10588) the tree had a Blue-tailed rat. The trap was baited with corn. One (10589) mose brought in an opossum which he said was caught in a dead-fall in a banana tree one mile west of Divisadero. The nefescent coloration I think is due to soil stain. I washed much of it out. This yellowish mucks is found in the mine tunnels.

October 17, 1925 - no rain.
In a trap baited with oat-meal set along the brush fence at an altitude of 850 I caught another
(10591) Blue-tailed rat. a trap at 1000 altitude had the foot of another. Just over the rocky ledge 1100 feet altitude is some wild narrow bladed grass. Traps set in this grass have never caught anything but one of my large snap rat traps set by a crevice in a rock at the edge of this grass
(10590) caught my first perfect Liomys. The ants were there but they had done no damage. a trap just below the rocky cliff in the heavy stemed plants had a Liomys which was ruined by ants. a trap set at the base of a tree near a large rock
(10592) had a Peromyscus; the ants had ruined the skin but the skeleton and skull were good. I had another Peromyscus in the crevice of a rock near by but the trap had crushed the skull and the ants did the rest. At an altitude of 1000 feet there is a big rock which stands out from the others along the cliff - a tree is firmly rooted in one of its big crevices. I set a steel trap in the crevice and baited it with tankage. This trap caught
(10593) an opossum. He was quite pugnacious

October 18, 1925 - no rain.
a small snap trap at an altitude
of 950 feet caught a small juvenile
mouse which I called White-bellied blue
(10594) (peromyscus) mouse. The trap was set in place
among the leaves and sticks where it
looked like mice had been passing
to and fro along the mountains side.
The trap was baited with oatmeal.
(10595) A Sigmodon was caught in a large
snap rat trap set by a crevice in
a rock at an altitude of 1000 feet.
This trap was about ten feet from
(10596) the rocky cliff. Another Sigmodon was
caught under a brush fence at an
altitude of 850 feet. At the place where
I crawled over the rocky ledge
there was many wide crevices one
of which seemed to be frequented
by some animal for the dirt there
was packed smooth and hard.
A trap set there baited with
(10597) oatmeal caught a Blue-tailed rat.
October 19, 1925 - Rained today.
I set a small snap trap by some
little round holes in a small
red soil bank. The bank was
held by the roots of some brush
that grew at the top. These places
are usually not over three feet high
and sometimes as low as one foot and
in some places low weeds or
such vegetation accustomed to shade
cover them so that one possibly wouldn't
think of them as banks. I mention
them particularly because there was
no rocks or crevices near them. In

the trap mentioned I caught a
(10598) Liomys. This was at an altitude of
900 feet. Directly up the mountain
side from this place was a large
lava rock which had broken away
from the ledge and slid down the
slope for some distance. The brush
and small trees had grown up
around it so it was nearly concealed.
Along one side of the rock and quite
close to it there seemed to be a run.
One might not be right in calling
this place a run but there were
no obstacles ~~in the~~ along that side
of the rock so it was quite obvious
if an animal came that way he
would choose the path of least
resistance. In a large snap trap
(10599) set in this run I caught a Sigmodon.
At an altitude of 1000 feet near the
rocky ledge under some thin brush
[redacted] I caught a Sigmodon in a no. 0. steel
(10600) trap. This place was near ~~the~~ a
patch of plants with staichy tubercles.
Before I blued with death I observed
that the iris was ~~b~~ dark brown.

October 20, 1925 - Rained during
the evening. In tall grass near the
(10592) rocks where I caught the Peromyscus I
(10601) caught a white bellied blue mouse. These juvenile
mice are probably the same species
(10602) as the Peromyscus. I caught a Liomys
at an altitude of 1150 feet under the
heavy brush. At the Protectora mine
I got many barn owl pellets. Half of a
~~Sig~~ Sigmodon lay by a nest of eggs there.

October 21, 1925 - Rained again today and most of the night. Near the top of the mountain Protectora at an altitude of 1200 feet I caught (10603) another white bellied blue mouse. This trap was set in some grass and brush. (10604) A Liomys was caught in a trap which had been set by a small hole for a week and hadn't been bothered. (10605) At 850 feet I caught an Oryzomys and at 860 feet I caught another Blue-(10606) tailed rat.

October 22, 1925 - Warm day no rain. Today we went to Encuentros again for bats. In a small strip of woods about ¾ mi. S.E. of Encuentros we hunted for about an hour. I saw one squirrel (Gray-tailed squirrel). The front part or the part near the opening of the mine is full of "stokes" and shafts. In the foremost of these "stokes" was where we caught the ~~grand~~ Grand pa bats. (10610-10611-10612-10613-10614), also two Whishered bats (10609), one of these escaped. The tunnel where we had the big net spread ~~was~~ led straight back from the external opening and just past the first lateral tunnel where there were many stokes. ~~The~~ We caught them one at a time by pulling the net down over them when they hit it. Farther back in the mine were other stokes there I shot two Brown-leaf nosed bats and saw many more.

October 23-24, 1925, trip to Manzanillo.

October 25, 1925- We made our station at a hacienda house on the west bank of the Rio Grascoran river 13° 30' N. The port of Manzanillo is about one hours mule back ride south and west. Along this side of the river is a high rocky cliff and about 500 yds. down the river is quite an extensive patch of virgin forest, which is obviously sub-tropical. Across the river to the east the bottom lands of the river extend probably three miles to a strip or short chain of Wonduranian mts. The Rio Grascoran river will average about 125 yds. wide and is full of allegators. At the base of the rocky cliff in the jungles perhaps half a mile south east of the house I found a mouse skull. Presumedy from an owl pellet, also I saw some Raccoon tracks in some soft soil. I am told they as well as deer are abundant here.

October 26, 1925- One of my traps which was set at the base of the steep rocky cliff had a (10615) Liomys. The trap was set close to the perpendicular wall. The two Blue-tailed rats were (10616) (10617) caught in similar sets. Van shot a Sigmodon in some carbón brush near a cotton field. Twenty traps set last night.

October 27, 1925- Mouse traps set under the loose rocks at the base of the rocky cliff and others set by trails and among the leaves caught three Peromyscus. From twenty traps set in the best places I could find caught only the three Peromyscus. The ants had destroyed the skin of one and partly ruined ~~the~~ another which, although the trap had broken the skull of the other the mouse was still alive! (10619) (10620) (10621) At one place in the cliff was a crevice where I heard some bats. By the light from my flash I shot one which proved to be a Gray leaf-nosed bat. (10622) Another trap at the base of the cliff had a Blue-tailed rat but the ants had destroyed its skin. (10623) Our hacienda house is tile roofed and the ceiling of our room is of canvas or heavy cloth. Between the canvas and the tile roof ~~[illegible]~~ are about one hundred and fifty Brown leaf nosed bats. I put up two. In the evening two native boys brought in a cottontail which they caught in a hole. It was badly torn and the mandible was broken but I put it up. I spent part of the night hunting with a carbide lamp. I saw one about 11 but was unable to shoot it.

October 28, 1925 - Rained during the late afternoon. At the base of the rocky cliff I found a small hole that led back into the rock wall; a small trap set there caught a Peromyscus. (10627) The traps again had two Blue tailed rats. (10628) (10631) These rats seem to be common in this region. A cat at the house caught two. From seventy two traps set I caught three Blue tailed rats and one Peromyscus today. As near as I can make out the Blue-tailed rats are omnivorous. As for the Peromyscus they eat insects and another substance in their stomach looks very much like seed pulp. In my experience in the tropics this far I have never been able to locate good places to set my traps by faecal droppings. I look around for the most likely place, and make my set. If I find a place where the colubrids are absent especially in the crevices of rocks I usually make a set there. As a usual thing the ground is so hard that one can never see tracks. It is fairly easy to locate Sigmodon because of their runs through the grass. They seem to be the most common mammal in the country.

October 29, 1925- Traps today contained three Peromyscus and two Blue-tailed rats. While hunting along a ridge in the dense woods today Van startled a doe from behind a clump of brush. We estimated the weight at about 100 lbs. We was within thirty feet of her before she jumped. A foreman told me that the deer hide during the day in the cañon and in the denser jungle and come out in the early evening and feed during the night in the cotton fields. I hunted again during the night saw one skunk, and smelt two others but was unable to get any.

October 30, 1925- I set eight large snap traps in a small patch of grass near a cane field. The cane field was in the bottom land of the Rio Grascoran river. In the (10637 10638) morning I had two Sigmodons.

October 31, 1925- The traps (10639) today had a Peromyscus which was so badly eaten by ants that it could only be used as a skeleton. During the late afternoon while hunting in the cañon ½ mi. s.w. of the (10640) house I shot a skunk.

November 1, 1925- Day spent traveling to Divisadero.

November 2, 1925 - at three o'clock in the afternoon I left for the Encuentros mine, on mule back accompanied by a moso. At the mine I picked up a guide, which Mr. Swanquist had gotten for me, and another moso to help hold the bat net and we entered the mine. The tunnel through which we entered was primarily epcavated for the purpose of draining the mine. Although it was used later for taking out much ore. At one time this mine was operated by the French. The old brick buttments of one of their old bridges still stand one on either bank of the Rio Seco river. Later the mine was turned over to an american company. We passed slowly on back ~~o~~ farther and farther under the hill, finally ~~we~~ the tunnels course turned slightly to the ~~left~~ right and we lost all light from the out side world. I followed closely on the heels of the guide and the two mosos followed me single file watching their step to keep out of the little stream that trinkled along one side of the narrow tunnel. An occasional bat squeeked as it ~~flitted~~ winged past frightened ~~by the~~ by the terrible light and heavy thud, thud, thud, of the feet of intruders. Frequently we passed within ten inch of shafts of unknown depths levelled with crystal like water. At last

11/2/1925

we came to the end of the drainage tunnel where shafts were numerous and stokes of all shapes and sizes led off in many directions. At this point there was more space and the bats were whirling by in large numbers apparently not knowing where or why they were going. I was able to recognize some Brown leaf-nosed bats and Grandpa bats hanging from the overhanging wall before they dashed off into the darkness of lateral tunnels and stokes. From the end of the outworld tunnel we followed the vein to the left; here the workings were quite extensive. The vein had laid at about an angle of 30° and was four to five feet thick. The guide suddely turned to climb the stoke along the side of which we had been passing at various intervals for several minutes. I followed closely. The foot wall was wet and time and again slipped and stopped a rapid descention only by grabbing a projecting ledge or the edge of a pocket. Thus we scrambled up the stoke bumping our heads on the overhanging wall all too frequently. Nearer the face of the stoke the bats commenced to fly past us in larger numbers. The guide selected a short lateral at the mouth of which we spread our net. As the guide turned to

make a drive from the face of the tunnel I said Grandpa bats by the quivering thousands from the overhanging wall. An occasional Whiskered bat large, and brown was quite conspicuous among the others. No sooner was the net spread than the victims began to fill it. Like winged arrows they shot in; the leaders could not turn back because the others piled in on top and they were followed by more and more, until within a few minutes the net was filled with a biteing, squeeking, and flopping mass. Dumbfounded I looked at the catch and tried invain to lift it. For an hour I sat there on the damp cold rocks by the dull glare of the mining lamp, and looking at each bat and keeping a selected number by slipping them into an extra bag. At last I arose with hands bleeding from dozens of small punctures. I had looked over 1037 bats all of which were Grandpa bats but eleven Whiskered bats. Had I been alone I never could have found my way out of that mine for all the tunnels and shafts looked alike to me now, just a blaze of bats.

November 3, 1925 - Day spent working up skins collected yesterday.

November 4, 1925 - With the aid of Van and a moco I collected with the net again at Monte Cristo. We drove the bats ahead of us by knocking them down as they attempted to pass. We set the net near a small stoke and made a drive, but all the bats flew up into the stoke and the net was empty. A drive in the stoke netted about fifty bats, two of which were Grizzley bats and two were Gray leaf-nosed bats. The others were Brown leaf-nosed bats and Yellow leaf-nosed bats, with the former the most numerous. We made another set farther back for a second drive in the main tunnel. While Van was making the drive he picked my second Franz Joseph bat from the perpendicular wall. This drive netted over fourhundred Brown leaf-nosed bats and Yellow leaf-nosed bats. Some of the Yellow leaf-nosed bats were shedding. I selected a series showing the change in pelage but most of them escaped. The best specimen I have to show that change is no. 10667. The juvenile bats were just leaving their mothers. We saw several hanging from the roof of the tunnel.

November 5, 1925 - Left for San Salvador in the afternoo

11/5/1925

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I set eighteen traps in a house which was infested with White-toed blue rats and caught twelve rats. The ants had ruined most of them and skulls were broken. Of the others so I saved only one specimen

November 6-11, 1925- These days were spent on a trip to San Salvador for equipment.

November, 12, 1925- Warm day. It rained 1.02 last night. Early this morning I left for the Amegeo mines at Comacaran on mule back and accompanied by a boy on foot. In places the road was very slippery due to the rain last night. Once my mule slipped and I was forced to dismount hurridly. In some soft mud in the trail we saw some tracks that were evidently made by a Tayra or some closely allied form. A little farther along were the well imprinted tracks of a Raccoon; this was a large animal. Also there were some weasel and rabbit tracks. In Comacaran I was met by Don Senior Manuel Basques who conducted me in the mine tunnel and through the mills. The tunnel was alive with bats but the arch was too high for my net to work successfully. However we caught several specimens of Whiskered bats and Brown leaf-nosed bats. The Brown leaf-nosed bats were more common near the mouth of the tunnel, and the Whiskered bats were abundant farther back. In the mills I saw Whiskered bats, Brown leaf-nosed bats, and Salvador brown bats (Peropteryx) I collected one (Peropteryx) for a record and in a house across the road from the mills I shot a ♀ Whiskered bat where several were flying about the room.

November 13, 1925 - Today I prepared to leave for Ciudad Barrios but we could get no open.

November 14, 1925 - I left for the Monte Cristo mine with my boy. We collected several hundred bats which were mostly Brown leaf-nosed bats and Yellow leaf-nosed bats, also there were two Grizzley bats and one Gray leaf-nosed bat. As we were coming out of the tunnel I noticed a bat in on of the lateral tunnels that seemed to have quite long ears. I shot it with my shot pistol after we had quickly spread the net over the mouth of the lateral. In the net we caught another. These bats I called long eared bats. They were not nearly so active as were the Brown leaf-nosed and Yellow leaf-nosed bats.

November 15, 1925 - Yet, not able to get away to Ciudad Barrios I made another trip to Monte Cristo. Mr. Swanquist told me of another tunnel on the ~~west~~ north side of Monte Cristo hill which he called the Monte Cristo drain tunnel. I found it impossible to ride my mule along the brush overgrown trail which led to the tunnels opening. The mouth of the tunnel was caved in but we managed to get down through ~~the~~ an opening where the tunnel had caved in. Just.

inside the water was quite deep; it was over my boots but the presence of many bats in the tunnel led me on. Soon the water decreased in depth and we were walking on solid footing again. The bats were there by the hundreds, yes, thousands. All of which I saw were Brown leaf-nosed bats and Yellow leaf-nosed bats. There was a continual dripping of cold water from over head. We turned off in a lateral driving most of the bats ahead of us. We tried to use the net once but the bats we caught looked like drowned rats so I put on gloves and picked my desired forms from the ~~wet~~ ~~bats~~ cold damp walls. The Yellow leaf-nosed bats and the Brown leaf-nosed bats were about equal in numbers. One bat No. 10682 with white wing tips and a white band across the shoulder is obviously an albino. I caught two and saw four more Whiskered bats. In the Main Tunnel at Monte Crist I caught three more long-eared bats, two of which were in the same lateral where I got two yesterday.

November 16-19, 1925
Traveling from Divisadero to Ciudad Carlos.

11/20/1925

November 20, 1925 - Today we went out to our new camp but as the cart man wouldn't bring our trunks we ~~had~~ had to return to town for the night. Our host proposed that he and I go night hunting and I immediately accepted. We were equiped with calcide hunting ~~lantern~~ lamps on our caps. We went out north of ~~Cobad~~ Ciudad Barrios and followed a small creek off to the west. Most of the night we were tramping around through coffee fincas and sometimes in cane and pineapple fields. As we were walking along the edge of a pineapple field near the creek, the light of my companion shinned the eyes of a cat? which he shot. His shot wasn't successful for as we rushed up the animal plunged off into a dense thicket. Later while I was hunting through some coffee bushes I flashed an eye and in an other instant flashed two eyes. I fired and heard ~~an~~ body crash to the ground from the top of the coffee bush from which the eyes had been shining. When I came up I found an opossum (Didelphis mesamericana ——),

Mt. Cacaguatique Region

Mt. Cacaguatique, Dept., San Miguel, Salvador

from November 21, 1925 until December 23, 1925.

it is an old volcano etc

Mt. Cacaguatique, eroniously termed Volcán Cacaguatique on the maps of El Salvador and by the natives, is one of the highest points of a short spur of the great transcontinental divide in the north and eastern part of El Salvador Central America. The water from the noth slopes of this small range are carried by numerous streamlets into the Rio Triola which flows almost directly westward where it joins the Rio Lempa which [redacted] at this point turns from its easterly course and flows nearly due south into the Pacific Ocean. The streams on the south and west end of these mountains flow toward the Rio Lempa gradually increasing in size as they join [redacted] until they finally flow into the larger [redacted] river. At the eastern end the water flows into streams then rivers which empty into the Bay of Jiquilisco.

The rock of this region is obviously volcanic but not caused by isolated volcanos in the locality since there are many cliffs which have a more or less regular formation and show evidences of faulting and slipping. The soil of a luminous sandy clay type is very loose and erodes rapidly where

cleared areas leave it exposed in the rainy season. However the soil is so fertil that it [redacted] provides a good water shed for itself if left alone for a short time.

The most remarkable and characteristic thing of the M.A. Cacaquatique region is the oak and pine association on the upper slopes at [redacted] 4000 feet and along the [redacted] canyon ridges which lead down from the summit. In places the oaks with their few scattered pines extend down to the very bottoms of the canyons where the Sonoran and Sub-Tropical zones meet. Many oaks are full of ? mistle toe and other prasitic plants, while on the ground beneath and especially along the north canyon slopes are dense beds of ferns and other wide leafed plants intiped with brush thick in one place and thin in another. Moss is always found on the shady side of the oak trees.

This is primarily a coffee region and with the exception of a few corn and grass patches the Sub-Tropical zone in the [redacted] canyons is occupied by coffee. [redacted] In [redacted] many placed along the streams there are banana groves in association with the coffee. Slowly but surely the ground is being cleared farther and farther up the canyons where young coffee is being planted and gradually the beautiful oaks are

yielding to the machetes since their shade is not fitted for coffee growing and they are being replaced by mother of coffee trees thus the Sub-tropical zone will eventually replace the Sonoran zone of the M.T. Cacaquatique region. Along some of the slopes the brush is so dense and tangled that it is impossible to penetrate without a machete.

After approximately two hours made back ride from Ciudad Darios we reached the pocket or nitch where we made our collection. From this south slope we could look off to the south and slightly to the west to the lofty Vols. San Miguel and the small range extending from it to Vols. Usulutan.

We are very much indebted to the Silva family of Ciudad Darios and to Don Jose for giving us permission to hunt on their property in this region and for cheerful and courteous they extented to us at all times.

Mammal collecting started November 21 when we received our last rain, and we left for Divisadero December 23.

Summary of Cacaoatique Notes
Nov., 21, 1925 – Dec., 23, 1925

Felis

Ocelot – Gato tigillo

Ocelots in this locality were encountered by me only at night, however our moso helper returned to camp one day with a tale about seeing a tigre run down a slanting tree and escape in the brush. If he saw a spotted cat it was likely an ocelot. The first specimen taken No. 18686 was shot on the night of our arrival by our moso. He reported that he shot it in the coffee near a small mountain stream. The second was shot by me. One night while following a trail through the coffee I thought I saw an eye flash some distance ahead and to my right in the coffee. On my left was a wild pineapple fence and a weed patch which bordered a small corn field. As I drew nearer to the spot where the eyes flashed they turned again full into the beam of my light. For an instant they remained still then they came bounding down toward the trail like two small balls of greenish fire fastened together. When they landed in the middle of the trail I fired. The shot knocked him out at first but he soon recovered slightly and I had much difficulty in killing him with a pole across his breast and a foot on either side of his body. The stomach content of this specimen was

Mt. Cacagualique, Nov. 21, 1925 - Dec., 23, 1925

Ocelot - Gato tigrillo

a Sonoran Peromyscus, a Cacagualique spiny-pocket mouse, and a Yellow mouse. A few nights later I saw another of these cats sitting on a small stone fence in the dense coffee. It sat there licking it paws apparently paying no attention to me but when I backed off to keep from blowing it to pieces I blast into eyes and was unable to shine them again. Another night I encountered a two animals together which I took to be this species. The eyes shined greenish in the beam of my lamp and one came bouncing down into a small ditch just as the one did I shot. These were seen at the edge of the dense brush and coffee.

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Nov., 21, 1925 - Dec., 23, 1925

Sub-Tropical Peromyscus

This species was the most common one found in the locality. Their range was confined strictly to the sub-tropical zone where it extended up the canyons usually in association with coffee. There were no obvious signs of this form but traps, placed under rocks, in brush, in banana groves, and even in the water of the small mountain streams, were sure to catch Sub-Tropical peromyscus if left there long enough. One trap, which was set about thirty five feet inside of the Sonoran zone caught one of these mice, but aside from this one specimen I found the Sonoran zone to be as free as a stone wall against them. From the stomach contents examined by me, I found the sub-Tropical Peromyscus to be omnivorous. Their food ranged from insects to green plant pulp. Although primarily terrestrial in habits I caught one on a fallen dead tree about five feet from the ground and at night I saw one running along a horizontal limb in the dense brush.

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Sonoran Peromyscus

Next to the Sub-tropical peromyscus the Sonoran Peromyscus were the most common mammal of the Cacaguatique mountain region. Undoubtedly they are as common in the oaks and pines as the sub-tropical form is in its zone, however most of my trapping was confined to the lower zone where more forms were found. I had no difficulty in catching them under logs, among ferns, and in old deserted (gopher tunnels) which were caved in many places and partly hidden by fallen oak leaves. Sonoran Peromyscus were found strictly within their own zone, no specimens were taken past the line of oaks and pines. I have no authentic record of scansorial habits in connection with this form. The same as with the Sub-tropical peromyscus the food habits of the Sonoran peromyscus are omnivorous. Stomachs examined contained chiefly seed pulp, plant pulp, and insect pulp.

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Nov. 21, 1925 — Dec. 23, 1926

Water mouse — Rata de la agua

Water mice were found commonly in small rocky canyon streams in the Sub-tropical zone. In places these streams were quite swift and with many little falls; ~~at~~ no place was the water quiet and it was always clear and cool. These little streams, across which I could step in almost any place, usually ran through the coffee; however frequently they ~~would~~ passed through patches of brush only to meet again with coffee, banana groves, or cornfields farther along ~~their~~ their courses. The Water mice were caught with large snap traps with no bait set in the most logical places in the stream. In many places I ~~set sticks~~ placed rocks in the ~~stream~~ so that the water could trickle through but only left one place for a water mouse to pass, and there I set my trap. I found that baited traps were loathed by other mice especially Sub-Tropical peromyscus and Yellow mice (Oryzomys). One specimen No. 10882 ♂ was caught ~~in~~ in a more quiet stream under some lilly pads, and another No. 10863 ♂ was caught a little farther down the stream under some heavy grass which overlapped the water. This stream was bordered on one side by an old corn patch and on the other by a dense weed and brush thicket. ~~The Water mouse is a very progressive animal~~

A Water mouse which was caught alive

Water mouse

fought viciously when I attempted to kill it. Another I found very badly cut up and dead. It had been caught by the tail and apparently died fighting. I have caught Muskrats (ondatra zibethica cinnamomina) which were chewed up in a similar manner obviously by some of their own kind. I saw many small frogs and snails along the streams where I caught the Water mice. ~~They~~ Water mice seem to be omnivorous in food habits. No. 10729 - meat and hair of small mammal, (the night before I caught a water mouse in the same trap, ~~which~~ the water mouse was eaten, only the hind feet remained in the trap), No. 10778 - starchy substance, No. 10795 - white starchy substance, 10847 - insects. I was unable to determine the contents of most of the stomachs and many were Empty.

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Harvest mouse

Harvest mice were not found commonly in the Mt. Cacaguatique region by me. The eleven specimens which were taken were found in various associations. No. 10706, an adult female was taken in a small snap trap baited with oatmeal under some green and dried banana leaves which were lying on the ground under some banana trees in a banana grove near one of the little canyon streams. Here the ground was heavily shaded. Nos. 10719 & 10754 were taken in the same grove with the same bait (oatmeal) and in similar sets. No. 10785 was caught in a small patch of tall rough bladed grass, which covered about ¼ of an acre, at the base of a steep incline toward the summit of the mountain, This little area was bordered on two sides with dense tangled brush, on another by a coffee nursery shed which was covered with banana leaves, and a mountain stream, and on the by a shaded coffee region. No. 10794 was caught on the roof of the nursery shed. Nos. 10855, 10868, & 10869 were juveniles which were taken in our work room, a mud plastered walled room. These little fellows squeaked for nearly two days before I discovered that they were mice and not insects. Their mother had probably been killed since they were apparently too

Mt. Cacagualique Nov. 21, – Dec., 23, 1926

Harvest mouse

young to take care of themselves. Nos. 1090♂ & 1090♀ were found by me in deserted birds nest high upon the mountain side near the Sonoran zone. The nest was found in dense tangled brush at the edge of newly cleared ground for coffee. I poked a stick into the nest and the two ran out together on the small twigs where I shot them with a shot pistol. As for stomach contents my notes record seeds, brown pulp, ——, empty, white starchy ~~pa~~ substance, empty, —, —, —, —.

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Heteromys

Mt. Cacagualique spiny-pocket mouse

These mice were found commonly in the sub-tropical zone and usually near the small-mountain streams. In this association they were taken in traps set under ~~rocks~~ the edges of rocks, at the base of banana trees, on brushy stream banks, on small drifts in the streams, along dripping rock walls between which the water ran, and at the water edge. No. 10768 was taken in a wild pine apple fence along the edge of a corn field and the coffee. This place was about two hundred yards from a stream. At one place where the Tonoran zone along one of the canyon slopes came ~~to the Sonoran zone~~ down and bordered a stream for about three hundred yards I caught 7 Cacagualique spiny-pocket mice barely within the sub-tropical zone. Here not more than ten feet from the water I set a trap baited with oatmeal by small round hole which led back and down under a rotten log. Within a week this trap caught four of these mice. Nos. 10897 & 10901 were taken at an altitude of 4000 ft. in dead brush and weeds. This was probably the highest point in the immediate region ~~that~~ where sub-tropical vegetation was found. Most of the stomachs examined were empty, but seed pulp, and plant pulp was what I found in those containing food.

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Cacaguatique spiny-pocket mouse

In the pouches I sometimes found seeds soft nut hulls, and frequently oatmeal from my traps or that which I probably spilled. The stomach content of Ocelot No. 10817 contained a Cacaguatique spiny-pocket mouse together with two other mice.

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Blue-tailed rat

These rats were taken in both the sub-tropical and Sonoran zones of the Mt. Cacaguatique region. No. 10709 was taken under the edge of a rock about two feet from one of the mountain streams which ran through a banana grove a few paces farther on. No. 10744 was taken at the base of a banana tree in the same banana grove. No. 10859, the Sonoran specimen was trapped among oak leaves not far from a strip of sub-tropical vegetation which followed one of the stream courses. No. 10880 was taken among some rocks partly covered with brush in this sub-tropical strip. No. 10899 the highest record for the region, 4000 ft., was trapped under rocks in the edge of the oaks. Unfortunately I did very little tree trapping so I have no notes as to the scansorial habits of this species in the Mt. Cacaguatique region. From the stomachs examined I find recorded in my serial [redacted] mainly green plant pulp & fibers, yellow plant pulp, and seed pulp.

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Gopher - Taltuza

Gophers were found commonly by me in this region but very difficult to trap. Their workings were found most abundantly in banana groves where they obviously feed on banana roots. Here they had many short terminating laterals, in which they would cover up traps as fast as they were set. Some of these laterals had short branches and thus many traps were covered where I thought I had them in the main run. The main tunnel never ran straight but might be found zigzagging off in any direction. I failed to take my trap when I caught No. 10710, with the result that I had to dig about eight feet along the get my specimen, not to mention how far I dug in the opposite direction first. This trap was set in a tunnel along the upper edge of a canyon on the border of a banana grove. No. 10803 was taken in a heavy grassy patch, No. 10818 in the coffee, and No. 10847 in a weed patch. I found no signs of this species in the Tonoran Zone but high up along the mountain sides in association with coffee and brush my feet were continually breaking through the soft dirt into their tunnels. Specimens taken were not as pugnacious as Geomys. Stomachs examined contained root fibers.

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Black shrew

The Black shrews I found not confined to the sub-tropical zone and not always in direct association with water and damp regions. No. 10730 was taken about 30 ft. from a mountain stream. The trap was set in a canyon under the edge of a rock in a banana grove. Carefully inspecting the place I found a small round hole approximately three feet away which led down under the rock at about a forty five degree angle. Nos. 10746 & 10752 were trapped in dense tangled brush on a mountain side through which I had to force my passage. Here I found many tiny well used runs or paths running in all directions under dead twigs, through roots, and in the open shade of the brush. Frequently along these runs I found little round holes in the ground some leading straight down and others at an angle. Nos. 10751, 10753, & 10767 were taken on the brushy bank of a stream in their runs among dead leaves. Here the ground was perfectly dry. The specimens taken nearest to a stream were Nos. 10832 & 10861. They were trapped among moss covered rocks and rotton logs where upon close inspection I found their runs. In the sub-tropical zone at an altitude of 4000 ft. I caught No. 10883 at the base of a tree in dead brush and leaves among weeds, and No. 10884 at the same altitude

Mt. Cacaguatique

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Black shrew

within the Sonoran zone in a little run from under a log. Three stomachs contained materials; black substance, insect pulp, and insects and starchy watery pulp. My most successful bait was tankage.

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Didelphis mesamericanus
— Tacuacin

This species was found commonly in the Mt. Cacaguatique region, and were continually getting into traps set for rarer species. I have no records of their occurance in the Sonoran Zone but found signs of them throughout the Sub-Tropical zone. My serial records their food habits as omnivorous.

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Nov., 21, 1925 - Dec., 23, 1925

Yellow mouse

The Yellow mice were caught only in the sub-tropical zone and usually on the banks of streams. Many were taken in traps set in the water for Water mice. Traps set on rocks in the streams and baited with oatmeal were sure to catch a Yellow mice sooner or later. Nos. 10800, 10805, & 10820 we caught in a patch of tall rough bladed grass (grass patch described in Harvest mouse notes). Nos. 10845 & 10849 were caught in a corn and bean patch where there was much grass; these traps were not more than 100 ft. from a stream. The trap were set in the grass, and at the base of corn stalks and bean vines, where there appeared to be signs of mice. Nos. 10867 & 10879 were caught in a stream where heavy grass lay over the water. This stream was bordered by brushy weed patches and old corn fields, being used for pasture land. Stomach contents were primarily plant pulp, however some contained seed pulp. Ocelot No 10817 had a Yellow mouse in its stomach together with two other mice.

Mt. Cacaguatique, Dept., San Miguel, Salvador
Nov., 21, 1925 - Dec., 23, 1925

Conepatus

— Gorrillo

Two females were taken by me in traps set in the sub-tropical zone. No. 10750 was caught in a well worn trail at the base of a rocky cliff in dense tangled brush. Her stomach contained dirt and some pieces of dead weeds. She was very fat. Unfortunately in killing this specimen I broke her skull. No. 10853 was taken in dense heavy brush in a hole under a large rock. Her stomach contained Nematode parasites. Neither of these specimens showed signs of fear or pugnacity when I approached.

Mt. Cacaguatique, Dept., San Miguel, Salvador
Nov., 21, 1925 - Dec., 23, 1925

Sigmodon

This form was not found as commonly in the mt. Cacaguatique region as in other localities previously visited by me, this was due obviously to the small areas where heavy grass was found. Nos. 10759 & 10760 were caught in the heavy ~~grass~~ rough bladed grass patch which I described in Harvest mice notes. Specimen No. 10770 was caught in a wild pine apple fence on one side of which was a grassy corn patch and on the other coffee. Nos. 10798 and 10799 were also taken in the heavy rough bladed grass. And No. 10875 was taken in a stream under heavy grass. This stream was in a irregular region bordered on one side by a brushy weed patch and on the other by a old corn field, being used for pasture land. Some starchy substances in stomachs looked very much like seed pulp, also green plant pulp and plant fibers were found in the stomachs.

Mt. Cacaguatique, Dept., San Miguel, Salvador
Nov., 21, 1925 - Dec., 23, 1925

Giant insect eating bat - Morciegalo

It was just at dusk one evening when I first heard then saw this large bat. The squeaks were similar to those of other bats but stronger. As the bats came flying out of the banana groves they started this fimilar sound and kept it up until dark. Those that I saw were diving and darting about high in the air, it was from this observation that I gave them their name. Others of our patay saw these bats hanging under banana leaves in the shady canyons where the banana trees were thick, and in one place they related having seen six or seven in one bunch. I found one hanging under a banana leaf in a side canyon but my shot pistol failed to bring it down. The four specimens taken were shot by our assistant. The four stomachs were empty.

Mt. Cacaguatique, Dept., San Miguel, Salvador
Nov., 21, 1925 - Dec., 23, 1925

Liomys

Spiny-pocket mouse

Spiny-pocket mice were not found as commonly in the Mt. Cacaguatique region by me as in other localities visited thus far. Nos. 10777, 10786, and 10807, were taken in a tall grass patch. (see Harvest mouse notes). No. 10796 was trapped along the brushy bank of a stream, and Nos. 10822, 10833, and 10911 were taken in a corn patch where there were many bean vines with many dried beans in the pods, and much dead grass. Here I found them in association with Yellow mice, Sigmodon, and short-tailed mice. The traps were set on the ground near the bean vines, near corn stalks, and in the dead grass. Stomachs examined contained white starchy substances, plant pulp and fibers, and seed pulp.

Mt. Cacaguatique, Dept., San Miguel, Salvador
Nov., 21, 1925 - Dec., 23, 1925

Large Agouti — Coluza

Large Agouties were found throughout the coffee region in close association with the dense brush from which I found many well worn paths leading out into coffee. No. 10784 was shot just at the edge of the brush and coffee near our camp in the late evening. Nos. 10815 and 10844 were shot in a little trail which led out of the dense brush into the coffee. Mr. van Rossem related that while watching this path at dusk one evening he saw an Agouti come out of the brush and upon hearing a rustle of leaves in his direction sit up ~~as~~ ~~it~~ ~~is~~ ~~he~~ with its back perfectly perpendicular and from this position he shot it. Early one morning I saw two Agouties dash off ~~from~~ through the coffee toward this trail. They ran very much like young shotes. No. 10854 was shot in the coffee by our helper. One stomach examined contained plant pulp, and two others contained green banana pulp.

Mt. Cacaguatique, Dept., San Miguel, Salvador
Nov., 21, 1925 - Dec., 23, 1925

Short-tailed mouse

The short tailed mouse a relatively rare species to the locality was met with ~~me~~ in the Mt. Cacaguatique region where I took five specimens. The name applied is erroneous when these small mammals are compared with Microtus or Synaptomys but in comparison to other mammals of this region they may be termed (short-tailed mice. No. 10814 was taken in a tall rough bladed grass patch. (see Harvest mice notes of same region). Nos. 10841 and 10842 were caught in a corn path where there were many bean vines with ungathered ripe beans and thick dead grass. Later No. 10916 was taken in this same corn patch. Here I found this species in association with Sigmodon, spiny-pocket mice, and Yellow mice. No. 10868 was trapped in a weed and brush patch near a grass covered stream (see Sigmodon, Yellow mice, and Water mice notes). Stomachs examined contained plant pulp, starchy red pulp, white starchy substance and insects. Female No. 10841 was carrying two 17 m.m. embryos and female No. 10916 was carrying two 13 m.m. embryos.

Mt. Cacaguatique, Dept. San Miguel, Salvador
Nov., 21, 1925 — Dec., 23, 1925

Spotted Cavies —— Tipisquinte

This species was met with by me only at night with my carbide hunting lamp. During the early evening of December 5th I left our cabin and followed the careta trail down to the little stream where we got our drinking water thence up a slight incline where the coffee was thicker and to where the trail turned off into heavier and denser coffee. Shortly after I turned the curve a large red eye flashed in the coffee to my left. I took a step or two more and fired low. The animal went crashing off through the dead leaves and twigs and I followed for about fifty yards and found my specimen making his final struggle for life. Near this place I flashed similar eyes several times until finally on the night of December 21st I killed a female not more than thirty five feet from where I killed the other, a male. I saw many tracks of these mammals in muddy paths through brush and weeds near some of the mountain streams. The print made by the front foot might be easily mistaken for that of a Raccoon but the toes are narrower and shorter. The natives claim they eat bananas. I found their skin hard to cut but easy to tear. Their flesh is palatable and is relished by the natives.

Mt. Cacaguatique, Dept., San Miguel, Salvador
Nov., 21, 1925 – Dec., 23, 1925

Oak Porcupine — Zorro espino

There is little to record of the sluggish habits of this animal since those that were seen were perfectly quiet and remained so until shot. No. 10819 an immature female was located among the smaller branches of a horizontal branch of an oak approximately fifty feet from the ground. When shot it came crashing to the ground with spines projecting in all directions. It was alive for about fifteen minutes after being shot but showed no inclination of pugnacity by biteing or clawing. No. 10821 was shot in a mango tree in the coffee, by our helper and No. 10820 was shot in the oaks. Stomachs contained green & yellowish vaile pulps. The foot pads of these animals were yellowish black as compared to yellowish flesh of those taken at lower altitudes. The flesh is not eaten by the natives.

Mt. Cacaguatique, Dept., San Miguel, Salvador
Nov., 21, 1925 – Dec., 23, 1925

Urocyon

— Gato ~~del~~ Monte

This fox like many of the other larger mammals was met by me only at night. One night while hunting along a carreta trail through the coffee I flashed two greenish eyes which disappeared suddenly into the coffee. This was near a turn in the trail. Several nights later while coming back toward camp along this same trail and quickly rounding the curve where I flashed the eyes before, I flashed two more eyes which ~~were~~ obviously ~~were~~ belonged to ~~an~~ the same species I flashed before. This animal turned to go into the coffee as the other had done but just as it reached the edge of the trail I fired and rushed forward to find a beautiful female fox, which became No. 10843 in my serial. No. 10902 was shot one night when it stepped suddenly out of a gulley, bordered on one side by coffee and on the other by a weed patch, into the carreta trail. The stomach content of one of these animals (No. 10843) was of insects.

Mt. Cacaguatique, Dept., San Miguel, Salvador
Nov., 21, 1925 - Dec., 23, 1925

Gray-tailed Squirrel, Variegated Squirrel — Sciurus

When we first arrived in the Mt. Cacaguatique region there were two hoodle trees with ripe yellow fruit. In these trees I saw three squirrels the first day I was in the field, but since our equipment had not arrived I did not collect any. No. 10860 was collected in the edge of the oaks, and No. 10872 was shot in a dense brush patch, where I was trying to draw a wren up closer by squeaking like a bird. Instead of the wren here came this squirrel and I shot it with my shot pistol. It had a large grub in its back. I saw two more of these squirrels in the oak region (Sonoran) but was unable to get a shot at them.

Mt. Cacaguatique, Dept., San Miguel, Salvador
Nov. 21, 1925 – Dec. 23, 1925

Odocoiles

– Venado

The natives reported deer to be found commonly in the Mt. Cacaguatique region, but I met with them only once, at night. I followed a trail which led up along one of the canyon ridges. At times I found myself in the coffee and again in the oaks until I at last reached an altitude of nearly 4000 feet. Here I came into an area where the brush had been cleared away and fresh green sprouts and weeds were nearly waist high. This was sub-tropical vegetation. While following the trail through this patch a greenish eye flashed some distance ahead and was lost again instantly. I worked forward as quietly and as rapidly as I could. When within about thirty five yards of the spot where the eye flashed it flashed again but at this time there were two. Slowly the long shovel like ears of a doe became visable ~~and~~ then I was sure of my specimen. I could barely make out the out line of her back but I aimed for behind her front leg, and fired. Down she went but was up again and off like a flash. I heard other deer move rapidly and crash off toward the oaks. Some minutes later I shined two

Mt. Cacaguatique

Nov., 21, - Dec., 23, 1925

deer

more deer in this immediate
area and fired at one but with
no result

Mt. Cacagualique, Dept., San Miguel, Salvador
Nov., 21, 1925 - Dec., 23, 1925

Procyon

Raccoon – Mapachin

I was able to collect no Raccoons in the Mt. Cacagualique region but saw tracks along some of the clear mountain streams. The natives claim they are quite common.

Mt. Cacaguatique, Dept., San Miguel, Salvador
Nov., 21, 1925 – Dec., 23, 1925

Potos
Lion Cat, — Gato leon

This was another species not collected by me in this region. Senior Silva of Ciudad Barrios told of having shot one of these animals in a hocote tree near Ciudad Barrios on one of his coffee fincas. He said that the shot didn't kill it so he took it home and it was becoming a very nice pet. I didn't see it.

Mt. Cacagualique, Dept., San Miguel, Salvador
Nov., 21, 1925 - Dec., 23, 1925

Felis

Mountain lion — Leon

Reported to be found in this locality by natives. I saw no signs.

Puerto del Triunfo, Dept., Usulutan, Salvador.
December 28, 1925 - January 25, 1926

Puerto del Triunfo, an old deserted sea port, is located on the north shore of a net work of tidal channels along the coast line of the department of Usulutan. For several years the port has been deserted. There are three chief reasons why Puerto del Triunfo has changed from a sea port into a fishing village. First, because a lumber steamer sank in the main channel, the masts of which are still sticking out of the water; second, because it would be necessary to contract for extensive dredging to open the channel for larger steamers; third, because the railroad company chose to run their line to La Union in preference to Puerto del Triunfo. Thus one now sees what were once well kept buildings constructed of northern lumber shattering into ruin and mouldering away under the inroads of termites. Many of the buildings are deserted, while in some rooms are occupied by natives but most of the inhabitants of the village live in their huts constructed of poles and zacate. The steel pier still stands but is rapidly rusting. There are perhaps two hundred people now living in

Puerto del Triunfo. The plaza is used for pasturing horses and cattle which are kept about the village; and in the center of the plaza is the cement water fountain and watering tank where native women come to do their washing and to get water for house use which they carry in earthen crocks on their heads.

A caneta trail leads due east through the dense and heavy coctal jungle from the north east corner of the village. It was along this trail that much of my work was carried on. At approximately a mile and one-half or two miles to the east, numerous small clear jungle streams, which taste strongly of sulphur, suddenly appear and flow off toward a swampy region within three to four feet trench like banks that decrease in height as they get nearer to the swamp. Where these streams burst out of the ground the trees are large, in the shade of which grow coltol palms thin in some places and dense in others; in the main branches some one hundred feet from the ground bands of spider monkeys (Ateles) are frequently seen feeding or scampering through the limbs. Nearer the swamp the over-head shade is not so high and the coltol palms are thicker. In the swamp region the trees are

few with ten to twelve feet aerial roots, and plants with large lilly like leaves take the place of collol palms which grow farther up along the streams. Along the streams and in the swamp are paths in the soft black mud made by Agoutis (Dasyprocta) and Pacas (Cuniculus). In most of the jungle along the caneta trail the collol palms are so thick that one cannot see far into it. It is in these collol palms and in the caneta trail where one sees the Pink-bellied Opossums commonly at night. The collol palms are covered from top to bottom with needle like thorns and every large mammal that one collects in this region has its feet full of thorns.

There is much second growth farther back along the trail toward the village. This brush is probably about twenty to thirty feet high dense, and in many parts tangled with vines. Much of this second growth is cleared away a second time, then grass springs up and thus the natives provide pasture for their cattle. In these clearings one frequently shines deer (Odocoiles) at night with a hunting lamp.

At the north and east corner of the village is a banana grove where the caneta trail begins.

In comparison to other banana groves the banana trees here are few and small perhaps because it is a young grove. Near the caneta trail the brush and grass is cleared but in the farther end of the grove there is brush and bunches of heavy dead grass. What might be called trails lead hither and through the brush and banana trees. Under the grass, brush, and about the banana trees are places frequented by Oryzomys, Sigmodon, and Heteromys.

Just over the back yard fence to the north of the old deserted hotel where we were staying, is a small but relatively heavy and dense patch of jungle. This little wooded area covers perhaps an acre and one half of ground. The undergrowth here is relatively tall and quite open beneath with many cow trails leading about through it. Frequently one can find horizontal limbs bridging over an open space from one dense clump of brush to another which are used as runways by Blue-tailed Rats (Ototylomys) and Hairy-tailed Rats (Nyctomys).

Beyond the small patch of jungle is a piece of pasture land possibly ten acres or more in extent. The terrain of the pasture is unleveled by lagoon like depressions which are obviously full of water during the rainy season. Grass in this pasture is heavy and coarse, and in the lower places it stands as much as ten feet high while on the higher points it is grazed down to waist high. Here and there throughout the grass are catsclaw bushes and at the west end of the pasture it has killed out the grass and is growing up in an impenetrable mass. There are a few large trees in the pasture most of which are dead, and hawks and vultures use the tips of the bare limbs as a roosting place or place to perch. Under the grass and in the catsclaw is an excellent harbor for Conepatus, Spilogale, Herpailurus, Sigmodon, and Oryzomys.

A large banana grove borders the pasture on the north. The banana trees in this grove are large and in clumps arranged in long rows. The grove is apparently well kept during the rainy season but at this time of the year there are many tight dead weeds between the rows. Dusty stock trails

leading through the weeds show many tracks of Conepatus, Spilogale, Melachinopes, and Procyon, and about some of the banana clumps are old Gopher workings. To the west of the banana grove are many rubber trees.

Along the west end of the grassy pasture are corn and cane patches not far from the upper tide flats. Natives report that much of their corn in these patches is taken by Raccoons. When one walks along the high tide flats many Procyon and Nasua tracks are seen where thousands of tiny crabs scurry into their holes in the salty mud. Most of the ground covered by the high tide is shaded by roof like rooted mangroves.

The flat country in the district of Puerto del Triunfo is obviously a slushy muddy mess during the rainy season, which is evidenced by the deep wheel rutted and dusty caneta trail leading from Jiquilisco the nearest railroad point.

Puerto del Triunfo Dept., Usulutan.
Dec., 28, 1925 - Jan., 25, 1926

Nasua

— Pisote

This species, the darker form, was found commonly at Puerto del Triunfo. The natives reported that they were found commonly along the upper tide flats where they fed on crabs. I met with them twice on a carreta trail which led through the dense jungle. The first was a solitary [redacted] and it crossed the trail about one hundred yards ahead of me and disappeared in the jungle before I could get a shot at it. The second [redacted] time was appoximately 5 P.M. when I met with a band of seven or eight. They crossed the trail some distance ahead of me, however the jungle was so dense I failed to get a shot at them although I followed them for [redacted] nearly ten minutes. At times I thought I heard individuals stop and root among the dry leaves only to hurry on an instant or two later. No. 10919 a female was shot in the muddy upper tide flats by a native. She was very poor. No. 10932 was shot in a small jungle trail in a group of several by a native. No. 11035 was brought to me by a native boy who said that he killed it in the jungle. Stomachs examined contained crabs, and insects.

Puerto del Triunfo, Dept., Usulutan
Dec, 28, 1925 - Jan, 25, 1926

Coendou

Porcupine — Zorro espino

At Puerto del Triunfo I met with and killed two adult female Porcupines while hunting in the daytime. The third No. 11036 an immature male was brought to me by a native boy who said he killed it in some vines in a tree in the jungle. No. 10920 was shot among vines in a tree about 25 ft. from the ground. At first it looked like a large wasps nest. This small group of trees was at the edge of the muddy tide flat, and on the opposite side was a corn patch, not more than three hundred yards from the little village. No. 10949 was found in dense tropical jungle where the coliol palms were found abundantly under the larger trees. This specimen was seen by me about 70 ft. from the ground among some dense vine near the main trunk of the supporting tree. It was so dark that I thought it to be a termites nest but when it moved I knew what it was. As usual with these forms this animal came to the ground with spines extending in all directions. One stomach contained green bark pulp.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 – Jan., 25, 1926

Least Bat – Morciegalo

We found this little bat in the old Red Hotel where we had our quarters. At dusk each evening they raced hither and thither up and down a large porch at the back of the hotel in association with Brown Leaf-nosed Bats which soon cleared out. Also I saw them fluttering under the eves along the side of the hotel bordering the main street. It was impossible to shoot at this time of the day because of the danger of hitting someone. No. 10921 I was caught I when it entered our room. We quickly closed the door and windows and it soon tired and came down. No. 11018 was caught in a butterfly net as it circled up through the back porch. I caught another in the butterfly net but it escaped through a small hole.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Brown leaf-nosed Bat - Murciegalo

Brown leaf-nosed bats were found commonly around the old buildings at Puerto del Triunfo. At dusk in the evening they chased up and down the porches and under the ~~eaves~~ ~~eaves~~ ~~the~~ eaves of the old hotel where we were staying. Although the Least Bats, their associates here, apparently stayed around close to the building all night, this species soon wandered off into the more open spaces. In the opposite end of the old hotel, where a large room had been used for a stable I saw eight Brown leaf-nosed bats clinging in a dark corner. By shooting into this bunch I collected Nos. 10959, 10960, 10961, and 10963. In another corner of the same room I saw two or three more. Others collected in the old hotel were Nos. 10924 and 11005. In the dense jungle where a little stream stalled suddenly with banks about four feet high, I saw two of these bats as they flew out of one hole in the bank into another. I was able to see one clinging to a root and shot it with my shot pistol. (No. 10928) In this immediate region I saw others in similar holes in the ditch banks,

Puerto del Triunfo, Dept, Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Metachirops

— Juron

This was an abundant species at Puerto del Triunfo. They were found in the heavy dense jungle, in natives houses, in tangled vines and in second growth. Frequently I was able to approach close enough to them with my hunting lamp at night to shoot them with my shot pistol. Sometimes they would crawl up in trees when they saw the light at times high and again on some low limb where they would cling closely to the branch never taking their eyes away from the light. One night as I was walking slowly along a trail through the dense jungle I saw some little red eyes flash in the brush to my right. I stood perfectly still and waited. Soon a juron came through the brush and stopped at the edge of the trail and sat up on his hind legs with his tail braced out behind. His little flesh colored nose twitched nervously as he faced the bright light. Not satisfied he dropped down on all fours and came toward me quite cautiously until his nose nearly touched the toe of my boot. Suddenly he seemed to realize that all might not be well for him where he was so he quickly ran into the brush on the opposite side of the trail and

continued his search for food by smelling everything that might serve for that purpose. Traps set in the clear water of the little jungle streams frequently caught this animal and their tracks were seen in almost every conceivable place. Like other Opossums the food habits of the jicotea are omnivorous.

Puerto del Triunfo, Dept., Usulutan
Dec; 28, 1925 - Jan., 25, 1926

Odocoiles

deer - Venado

Deer were common in the second growth jungle and clearings at Puerto del Triunfo. On several nights I flashed their eyes in these places but they were usually out of range of my sixteen gague shotgun. The young female collected, No. 10925, was shot where a strip of second growth had recently been cleared away for pasture land. Obviously the deer came to these clearings to feed on the tender sprouts and grasses which were springing up. The specimen collected was alone but at other times I saw as many as three feeding close together in the clearings. The natives are fond of venison and gathered around like so many vultures when they heard of the kill. The better class of people consider it one of their best sports to hunt at night for deer with carbide lamps. Deer eyes reflect greenish before the carbide light.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Potos
Kinkajou; Lion Cat — Gato mico; Gato leon

One specimen of this species was taken by me at Puerto del Triunfo. We were walking along a carreta trail which led through the ~~jungle~~ dense jungle when my light flashed two red eyes on a tree which spread readily across the trail. It took two shots with the 410 shotgun and one with the 16 ga. to bring her down. Her tail was strongly prehensil and her stomach contained fruit which she was obviously getting in the tree for I saw monkeys (Ateles) feeding there the following day. The natives reported that they were more common in the region.

Puerto del Triunfo, Dept. Usulutan
Dec., 28, 1925 – Jan., 25, 1926

Blue-tailed Rat; — Raton

This rat ~~found~~ trapped in other localities chiefly under rocks ~~and~~ and logs ~~was~~ found positively scansorial by me in this locality. They were caught primarily in tangled second growth in vines and on horizontal limbs. However some were taken in low trees and brush in dense and heavy jungle. No. 10927 was shot with a shot pistol one night as it was running along a low and small horizontal limb beside the carreta trail which led through the heavy jungle. It was due to the reflection of this specimens eyes that I noticed it first. Many fine specimens were ruined by ants especially if the traps were set among dead vines or dead twigs and limbs. The stomach contents varied from seed pulps to green plant and green leaf pulps.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Didelphis
Pink-bellied Opossum; — Zacuacin

Apparently this form is confined to the heavy tropical jungle and especially the Coliol-palm association. It was in this type of locality that I found the form most commonly at Puerto del Triunfo. Their tracks together with those of the jurón were thick in the dusty capsita trail that led through the heavy dense jungle. One came into the trail one night ~~[illegible]~~, obviously not noticing me or my light, snooping along and found a piece of an orange. He dropped back on his haunches with a hump in his back and his tail straight out behind, took the prize in his hands and proceeded to eat. When he had finished he carefully licked his paws, looked around for more to eat, and soon waddled on down the trail. The tracks of the Pink-bellied opossum were found abundantly in the little jungle streams together with those of the jurón. Usually when met in the jungle at night the Pink bellied opossum would hurry up the nearest tree from where his little red eyes would reflect in the light of a hunting lamp. They were omnivorous in food habits.

Puerto del ~~Tunal~~ Triunfo, Dept., Usulutan.
Dec., 28, 1925 - Jan., 25, 1925

Oryzomys

Most of these specimens were taken in a brushy banana grove at the ~~south~~ north east corner of the little village. Here the banana trees were few and rather small and many trails led hither and thither through the brush and heavy dry grass. At the bases of some of the bunches of grass ~~were~~ were ~~stems~~ stems which had been nipped into small pieces. In these places and at the bases of banana trees was where most of my Oryzomys were caught. This banana grove covered about an acre of ground; when we were breaking camp the owner had cleared away about half of the brush and grass. No. 10972 was taken on some vines between two trees at the edge of the carreta trail which led through the jungle. Nos. 10933 and 10947 were trapped in second growth jungle in vines about six feet from the ground. In all places where I caught Oryzomys water was never less than two hundred yards away and in most places farther than that. These were small streams that were drying up fast. The stomach content of most specimens taken was either ~~seed~~ pulp, or plant pulp, and sometimes both. No. 11032 contained insect and orange pulp; and No. 10986 fruit pulp and seeds.

Puerto del Triunfo, Dept, Usulutan
Dec, 28, 1925 – Jan, 25, 1926

cottontail – Conejo

This species was encountered by me only at night when would see their eyes reflect before my light. as compared to other mammals their reflection was not so bright. No. 10935 was shot in a cow trail which led off into a grassy pasture where there were no trees. There were two but second escaped into some tall grass when I shot. No. 10941 was killed in the old plaza which was sodded nearly solid with short grass. There were many horses and cattle grazing here all the time. This specimen allowed me to approach close enough to kill it with a shot pistol. No. 11014 was shot in a corn patch where the stocks had been cut off and carried away for feed. There was much tender grass springing up here.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1926 - Jan., 25, 1926

Oryzomys
Ochraceous-rumped mouse -

Only four specimens of this species was taken by me a Puerto del Triunfo. Nos. 10938 and 10951 were taken in the same trap which was set on a dead leaf and vine covered log near a carreta trail through dense and tangled second growth. There were many traps set in similar places in this immediate vicinity. The specimens were taken at least one-half of a mile from one of the little forest or jungle streams. Nos. 10992 and 11013 were taken at the base of tall heavy grass in a brushy banana grove. (see Oryzomys notes) Here I found this mouse in association with other Oryzomys, Sigmodon and spiny-pocket mice, while in the second growth I found only Oryzomys and [redacted] spiny-pocket mice with them. Stomach contents showed white starchy pulp. At its advanced stage of digestion I was unable to tell whether it was seed or plant pulp.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

spiny-pocket mouse -

Spiny-pocket mice at Puerto del Triunfo fell into my traps in their usual numbers. Nos. 10937 and 10963 were among the dry leaves on the ground under coffol palms in the dense heavy jungle at night. I first was aware of their presence by hearing the leaves rustle at one side of the Carreta trail. In the lamp light I could see them making long leaps to escape. I killed both specimens with my shot pistol. Nos. 10952, 10978, 11000, and 11034 were trapped in a brushy and grassy banana grove at the ~~north~~ South east corner of the village. I found that these specimens were taken more frequently in or near dried weeds however most of my traps in these places were set under or at the base of banana trees. (For more detailed description of the banana grove see Oryzomys notes). No. 10973 was caught among dry leaves on the ground under second growth jungle. Near this spot much ground had been cleared away for pasture land but part of it had been allowed to grow up again into second growth jungle which was tangled with vines in most places. No. 11033 was taken at at the edge of a tall heavy grass pasture under cafeclaw bush. All stomach examined, but one, contained seed pulp. No. 11000 taken in the banana grove had plant and seed pulps in its stomach. Some specimens had little brown seeds in their pouches.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Sigmodon

cotton Rat — Raton de Zacate

Sigmodons were found commonly in the bushy banana glove at the north east corner of the village where they were taken primarily at the bases of and under the tall heavy grass. (See Oryzomys notes). In the banana grove Sigmodons were found in association with Oryzomys, ochracous-rumped mice, and spiny-pocked mice. Specimens taken ranged in size from a 182 m.m.l. immature female to a 289 m.m. l. adult male. No. 110245 ♂ was trapped in a grassy pasture north west of the village. Here the heavy grass was about eight feet high in lower places while in other parts of the pasture it had been grazed down considerably. In this heaviest grass I caught a Gato Nutria (Felis) in a trap baited with a Groove-Billed Ani. Along the west end of the pasture was ~~[illegible]~~ much catclaw through which one could go only by following cow trails. This pasture probably covered about ten acres.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Sharp-tailed mouse -

Only four specimens of the sharp-tailed mice were taken by me Puerto del Triunfo. Nos. 10950 and 10975 caught in vines leading down from the top of a tree at the edge of heavy dense jungle. The trap was set about four feet from the ground. Under the vines was a small jungle stream. In these vines I caught a Pigmy opossum and other Oryzomys. No. 10971 was trapped on the ground in a dense growth of lilly like plants not far from a swamp. This place showed evidences of being very muggy during the rainy season. No. 11010 was caught under a log in catsclaw brush at the west end of the heavy grass pasture north west of the village. The ants destroyed the skin so I saved the skeleton only. Food habits seem to be the same as with other Oryzomys seeds and plant fibers.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925, — Jan., 25, 1926

Ateles

Spider monkey — Mono

Spider monkeys were common in the heavy jungle east of Puerto del Triunfo. They were usually encountered in bunches of six to twelve feeding on fruit in the trees. A bunch was frequently found in the same or immediate vicinity where they were seen the day before. Along one of the small jungle streams where I had a trapline I saw an adult male and female, and their tiny babe in the same tree every morning for one week, where they were feeding on fruit. When traveling through the trees the monkeys apparently knew exactly where they were going for they traveled at a rapid pace with their eyes on me half of the time. Thus they passed through the trees one after the other and each followed the same route taken by his predecessor. I have seen a string of adult monkeys pass through a tree and not vary more than twelve inches in the places where they grabbed and swung on the branches. Young ones or those as much as half grown frequently get off the trail when they are trying to watch me and escape at the same time. However I have watched young ones follow their elders when my presence wasn't

spider monkey

suspected and it was remarkable how closely they followed the trail through the branches. As per usual the spider monkeys were very curious ~~[illegible]~~ as soon as their curiosity was satisfied they uttered all the curses they knew and beat the branches with their bare feet ~~[illegible]~~ and hands and with sticks ~~[illegible]~~ to scare away the unwelcome intruder. Frequently young monkeys would rush out on a branch curse like fury and go through all the frantics known in the monkey kingdom then hurry back to its mother and hug her affectionately as if he had been away for months on a dangerous errand. Many juvenils not able to take to the branches clung to their mothers backs.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Agouti — Cotuza

Agoutis were frequently heard as they went crashing and barking off through the dry dead leaves under the collol palms. Occasionaly I would get a brown flash as an agouti passed thorugh an unshaded space but could not be seen long enough to get a shot. Early one morning while I was running my trap line along one of the jungle streams I saw [redacted] one disappear in some lillie like plants at the edge of the swamp into which the stream ran. The next morning it was in the same place and I shot it. Agouti tracks were found commonly along the streams and in the swamp in association with those of Tipisquinte. In many places in the swamp there were well used trails.

Puerto del Triunfo., Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Marmosa

Pigmy opossum—

Two Pigmy opossums were taken by me at Puerto del Triunfo. No. 10958 was caught in vines leading down from the top of a tree at the edge of semi-dense jungle. It was caught in a small snap trap baited with oatmeal. The trap was about four feet from the ground. Three nights before this specimen was trapped I saw what I decided was a Pigmy opossum in these vines and shot at it with my shot pistol. [redacted] Its eyes shined faintly but I could see it quite plainly in the ray of light from my carbide hunting lamp as it [redacted] head downward to one of the vines. No. 11004 was caught in a small snap trap baited with oatmeal and set on a mass of small vines in tangled second growth. The little trap had come down on its [redacted] neck but did not kill it. I took it to [redacted] camp [redacted] alive and [redacted] a large holdfast rat trap down slowly on its neck so as not to kill it. Its tail was obviously prehensile so we tested its strength. Mr. van Rossem allowed the little opossum to get a good wrap on his finger with its tail then I slowly let the weight of the trap come to bear on its neck,

Pigmy Opossum

and thus for at least thirty seconds it held the trap before its tail began to slip. The stomachs of both specimens contained fruit and insects. Natives were not acquainted with this genus.

Puerto del Triunfo, Dept., Usulutan
Dec, 28, 1925 - Jan., 25, 1926

nine-banded Armodillo — Cutuco.

Armodilloo were encountered frequently while I was hunting at night with a caibide hunting lamps. However their eyes did not shine. While walking along the careta trail through the dense jungle and collol palms I often heard them working around through the dry dead leaves. One night I heard one coming toward me so I stood in the trail and waited. It came out of the brush slowly and came up within two feet of me before it got scent of me, when it turned and hurried back into the brush where I saw it no more. another night in the dense jungle under the collol palms I heard three in one place not more than thirty feet from each other. No. 10965 was shot in the old plaza in Puerto del Triunfo. The plaza is now a grassy pasture where many horses and cows of the village feed.

Puerto del Triunfo, Dept., Usulutan
[redacted], Dec., 28, 1925 - Jan., 25, 1926

Black Rat - Raton de Casa

Black rats were found commonly in the old buildings at Puerto del Triunfo. Nos. 10980 and 11006 were caught in our work room in the old deserted hotel where we had our quarters. All night long we could hear them chasing up and down the rooms. Natives reported that their houses were full of Black Rats.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 – Jan., 25, 1926

Raccoon – Mapachin

Raccoon tracks were seen commonly in the dusty roads and ~~on~~ on the muddy banks of small streams near corn patches. Natives reported that raccoons frequently visited their corn patches and did much dammage especially just before the ears dry and hard. In a weedy banana grove north of the village I frequently saw their tracks in paths that led hither and thither through the weeds and banana trees. No. 10985 was shot in a tree in a small patch of dense jungle near the old hotel where we were staying. He was very fat and had corn in his stomach.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Desmodus
Vampire Bat -

On the morning of January 14, 1926 while running my trapline along one of the small jungle streams about one mile east of the village of Puerto del Triunfo I traied from my regular path to watch for an agouti when I located a large tree which ~~had~~ a hollow at the bottom. The cavity in this tree was probably two feet in diameter while the external opening was perhaps two and one half feet wide at the ground with both sides tapering to a point about four feet above. The trunk ~~was~~ approximately four feet in diameter turned from a slight angle at a height of about twenty feet to direct heavenward. The cavity was damp and the fine pieces of wood ~~and~~ and wood dust within were soggy and sheltered many cockroaches some of which were as long as my index finger. When I stooped down by the opening the familiar squeek of bats came to my ears and I could hear them restlessly shifting their positions. I held my shot pistol in the cavity and fired twice. One bat came tumbling down and three others flew out but soon swung up under the leaves of the dense coleol palms where I brought them down one after the other. These

Puerto del Triunfo Dec., 28, 1925 - Jan; 25, 1926

Vampire Bat

Of these specimens Nos. 10988, 10989, 10990, & 10991 were alive when I got back to camp although they were badly shot up. After the first two shots I fired three more into the cavity with no result. I could hear more bats in the hollow but they had apparently worked up around the curve where the shot could not reach them. On the following day I succeeded in dislodging only two, Nos. 10995 & 10996, but could hear more. All specimens thus far taken I recorded in my serial as Red Vampires. On the following morning, after I had killed the two, I discharged my 16 ga. shotgun in the cavity and brought down another Red Vampire No. 11002 and a Grizzley Bat (gray phase) No. 11003. The stomachs of all specimens taken contained dark sticky semidigested blood. While hunting at night in the dense jungle I frequently saw large bats fly into the ray of my light, they were probably this species or some other equally as large.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Urocyon

[redacted] Urocyon was not met with by me dir my nocturnal excursions with the hunting lamp at Puerto del Triunfo. Perhaps because my hunting was primarily confined to the carreta trail through the dense jungle. No. 10998 was shot and given to me by the post master of the village.

Puerto del Triunfo, Dept, Usulutan
Dec., 28, 1925 - Jan., 25, 1924

Hairy-tailed Rat -

Only one specimen of this species was taken at Puerto del Triunfo. It was caught in a large snap trap set on a horizontal limb in second growth under large trees in a dense piece of jungle near camp. The limb in which the trap was set was approximately two inches in diameter with its base end connecting with adjoining brush by a long pole and with the tips of its branches touching brush on the other side. Although this trap and many others set in similar places were kept baited with oatmeal and bananas for a week no more Hairy-tailed Rats were taken. Frequently some of the traps would have a Blue-tailed Rat. The Hairy-tailed Rat was caught with oatmeal. No. of specimen 11809.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Sciurus

Gray-tailed Squirrel, Variegated Squirrel - Hardia

During our stay at Puerto del Triunfo I saw five Gray-tailed Squirrels. Two were seen in the dense coliba palms in the jungle about a mile east of the village. One was eating Coliba palm fruit and the other was running up a slanting tree from where he had been rustling in the dry leaves on the ground. Two others were seen at the edge of a corn patch north of camp, one ran up a tree where he was shot, No 11011, and the other escaped in low dense brush. The specimen taken had corn in his stomach. The fifth squirrel was in an orange tree just back of the old hotel.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 – Jan., 25, 1926

Conepatus

— Zorrillo

It was not until I offered a reward for a Zorrillo that I got any of this species. Natives would get out in the heavy grass pasture at the north west corner of the village and roam about until they saw a Zorrillo, then as near as I can figure out, they would rush up and crack it over the head trying to hit it hard enough to stun it but not break the skull. Thus they would bring it in alive and say they lassoed it. No. 11031 was caught in a trap set in a run through a weedy banana grove north of the village. The trap was set in the path with sliced green bananas on either side. When I returned the next morning and found my skunk all the bait was gone. The stomach content of this specimen showed green banana pulp and insects. No. 11087 was killed by a mozo in the dense jungle. In some of the stomachs I found corn and Nematode parasites were frequent.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Spilogale
Tropical spotted-skunk - Zorrillo

Both specimens taken were caught in the weedy banana grove north of the village. No. 11025 was caught at the base of a clump of banana trees where a little dusty run passed into dense weeds on either side. The trap was baited with green bananas sliced around the set. No. 11040 was caught in a similar path which ran through the weeds. This trap also was baited with sliced green banana. Its stomach contained Nematodes.

Puerto del Triunfo, Dept., Usulutan
Dec. 28, 1925 - Jan., 25, 1926

Herpailurus
Yagouaroundi — Gato Nutria

Natives at Puerto del Triunfo were obviously well acquainted with Gato Nutria for they spoke of it many times. The only Specimen taken, No. 11039 was caught in tall heavy grass in a pasture north of the village. The trap was baited with a Groove-billed Ani which was hung above the trap. The cat was surprisingly mild when taken from the trap and Skilled.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 – Jan., 25, 1926

Saccopteryx
Two-lined Bat –

Ten of these bats were brought in to me by our assistant, from the Peninsula de San Juan del Gozo, where he shot them in a hollow tree. They had been exposed to the sun too long and I was unable to put them up.

Puerto del Triunfo, Dept., Usulutan
Dec, 28, 1925 - Jan., 25, 1926

Gopher - Taltuza

In the banana grove north of the village I saw old gopher mounds but my traps failed to catch any as they were not working.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Myrmecophaga
Anteater — Perico ligero

Natives reported that anteater were found in the jungle. I found the skeleton of one and brought it to camp but a dog dragged it away that night.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Cuniculus

Paca – Tipisquinte

In the swamp region of the dense jungle I saw Tipisquinte tracks in association with those of Agouti.

Puerto del Triumfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Felis

Ocelot - Gato tigrillo

Reported to be found here by natives.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 - Jan., 25, 1926

Felis

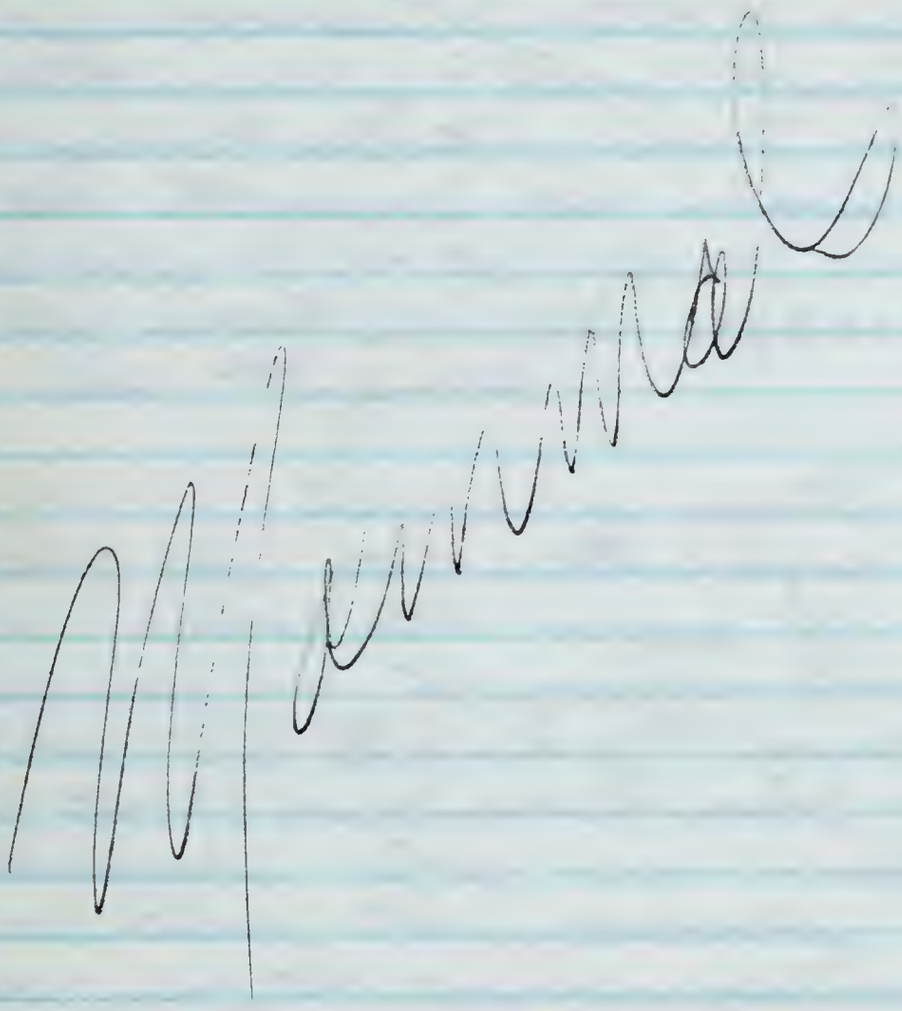
Jaguar — Tigre

Said to be found in the dense jungle east of Puerto del Triunfo.

Puerto del Triunfo, Dept., Usulutan
Dec., 28, 1925 – Jan., 25, 1926

Mazama

Reported to be found in the dense jungle east of Puerto del Triunfo by natives.



Rio San Miguel, 13°25'N. Dept., San Miguel
February 2, 1926 – February 21, 1926

Our location in this camp is approximately 13°25'N., near Rio San Miguel. From Miraflores the first station south and east of San Miguel our station is three miles to the south and slightly to the west in the department of San Miguel.

This is a cattle ranch where the owner Don Enrique Pruneda has about 600 head of cattle grazing in the grassy lowlands along the Rio San Miguel to the north and west side of Lake Olomega. They are milking more than three hundred cows here for the manufacture of cheese for the San Miguel market. There are six new adoby houses with red tile roofs and about as many old grass and pole huts with thatched roofs. During the day the men are busy about the ranch and the women are grinding corn or carrying water to do their work about their shacks or houses.

The soil of this region is a heavy grayish adoby mixture, while along the Rio San Miguel

there are rich alluvial deposits which I should say consist mostly of volcanic ash which has been carried down from the volcanos. In some of the old swampy regions one sometimes finds a thick loam~~mm~~ layer, a product of decayed vegetation, which is very suitable for agriculture.

Our work here has been carried on in the dry season. The sky is ordinarily clear and during the day the thermometer usually registers about 90°F while at night it goes down sometimes as low as 65°F.

A dusty cow trail leading west from the little clump of mud houses and shacks takes one to the Rio San Miguel which is one half mile away. As one crosses an old dry ditch like lagoon he comes to wild pine apple hedges, wide, dense and thorny that section the rich deposits along the Rio San Miguel into small fields or patches of perhaps an acre and a half or two acres.

One of these fields

an old weedy bean patch is bordered on two sides by wild pine apple hedges, another by a wire fence, and the fourth by the Rio San Miguel, stock trails, some faint and others plain, lead hither and thither over old worn down furrows and through dead bean vines, which have climbed upon volunteer cane stalks and scattered low brush. These trails are frequented by Mephitis, Melachiodes and Procyon evidenced by their tracks which may be seen in the dust in early morning. Here and there are seen green patches of grass or green vines but for the most part the vegetation is dead or awaiting the awakening rains of the wet season.

On either side of the old bean patch are melon patches whose melons will soon be ripe. And farther up and down the river one can see cane fields, small patches of green pasture land, and an occasional thatched roofed hut.

The Rio San Miguel in this region will average about 50 yards wide and its waters move so slowly that one would be inclined to think that it is

a long narrow lake instead of a river. Floating mats of water lillies are clogged in close to the banks where the wind cannot get at them. Following the river bank is a strip of tall heavy green grass perhaps twenty to thirty feet wide which extends down to the water's edge. Under the tall green grass is the last years growth dried out by the long absence of rains. In this grass many Oryzomys and Sigmodons are found.

The willow trees along the river's bank are full of large "garoras" or lizards which dive into the water head first as one passes close by. These iguanas dig holes in the soft sandy like soil on the bank where they lay their eggs. Big dead ceibas along the river usually have two or three Black Vultures perched on their naked limbs while high up in the sky other Black Vultures, Turkey Vultures, Wood Ibis and and occasional King Vulture are soaring in wide circles.

The old dry ditch like lagoon leads in a North and easterly direction from the wild pine apple

hedges to an area where the jungle is dense. In many places on either side of the old lagoon bed there are dense thickets of cohol palms. Under the palms one frequently sees Dasyprocta and in hollow trees in these thickets one can rout Saccopteryx. There are water holes in some parts of the old lagoon that are slowly drying up, and it is in the soft mud here that Procyon and Nasua tracks are common.

Back nearer camp and on higher ground are scrubby Jincard and Dividivi trees growing in adoby soil. The ground is dry and hard with two and three inch cracks, and the grass is short and dry, here and there replaced by short dry dead weeds.

Approximately three hundred yards east of camp is a field enclosed by a pole fence. Most of the field contains dry corn stalks but part of it is covered with low dead weeds through which well worn trails of Sigmodon run from one crack to another in the adoby soil. The trash is now cleared back from the pole fences so that

the field may be burned.

A winding carreta trail takes one off through a dense jungle to the south east. Along this trail the jungle is dense and green with a few cabbal palms and trees with broad green leaves.

About a mile to the south east at the termination of the carreta trail there is an old lagoon, in which the water is probably not more than three or four feet deep in the deepest place. Many water birds are found here and the place is alive with minnows. In the water are many dead trees still standing and it is in these trees that one frequently locates Procyon at night with a hunting lamp. Many deer tracks are to be found in the soft mud at the water's edge.

For many miles around our camp the country seems to conform with the descriptions given here.

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 – Feb., 21, 1926

Sigmodon

– Raton de Zacate

Sigmodons were found commonly in this Rio San Miguel region. No. 11041 was taken in a trap set under a heavy bush of grass at the edge of a corn patch, dense brush, and weeds, at least one half of a mile from water in an old lagoon. Not far from this place No. 11146 was caught in a wild pine apple hedge which bordered some second growth and a dense patch of jungle. A large number of specimens were taken in traps, perhaps one quarter of a mile from the places spoken of in the opposite direction from the lagoon, in traps set in low weeds. Here the ground had been cleared away and a little farther over was a corn patch but the ears had been gathered. Well worn paths led about through the low brown weeds some going into the large cracks in the ground and others occasionally leading over to the edge of the dense jungle. The best spot I found for Sigmodons was in an old weedy bean patch near the Rio San Miguel. The beans had been picked and stock had been allowed to feed in the patch, thus making trails which

Sigmodon

led here and there through the weeds and brush and along the wild pine apple hedges. Traps set under the old bean vines and under bunches of tall green grass at various places in the patch caught many Sigmodons. More successful yet were traps set in heavy green grass on the bank of Rio San Miguel at the west border of the old bean patch. This grass grew down to the very waters edge and was so dense that I had to part it to force my way in to set traps. It ran in a narrow strip along the rivers bank as far up and down the river as I was able to get acquainted with while at this camp. The usual food habits were common; seed and plant pulp. However Nos. 11048, 11049, and 11068 had wild pine apple fruit in their stomach, it smelled so rich and strong that I first thought it to be some species of wild onion.

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2 - 1924 - Feb., 21, 1924

Didelphis mesamericanus
— Tacuacin

Three opossums of this species was added to my list from this locality. No. 11042 was caught by our helper one night while he was hunting with a hunting lamp and brought it camp alive. No. 11060 was caught in a trap set under a wild pine apple hedge that bordered the old weedy bean patch on the south where I caught many Sigmodons and Oryzomys. The trap was baited with a freshly killed Groove-billed Ani. No. 11094 was shot at night by one of our men. I frequently saw the tracks of these opposums early in the morning in grayish dusty cow trails which led through scrubby Jicaro or Guacal trees and Dividivi or Cascalote trees. The natives are well acquainted with this mammal and call it Tacuacin. The stomach content of one of the specimens taken contained seed hulls and hair but the others were empty.

Rio San Miguel, 13°25'N., Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Metachirops

— Juron

Although not as common at Our Rio San Miguel camp as at Puerto del Triunfo, the Juron was frequently encountered at night. No. 11043 was seen by me one night while hunting with my carbide lamp. While walking along one of the well used cow trails in the pasture jungle, I heard a rustle in the dead leaves and the next instant flashed a pair of tiny red eyes which were moving rapidly here and there through the brush, but suddenly disappeared. And when I located them again they were in the tree over my head and with the bull's eye of my light I could make out the form of a Juron creeping slowly along a horizontal limb through some vines. I backed off to a proper range and killed him with my sixteen gague. No. 11075 was caught in a trap set under a bunch of tall green grass ~~near~~ in the old Speedy bean patch near Rio San Miguel. The trap was baited with Groove-billed Ani. Two days later I caught a skunk (No. 11087) in the same place. No. 11095 was caught under a wild pine apple hedge in the same place where I caught Tacuacin No. 11060. Jurons are very pugnacious.

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 - @ Feb., 21, 1926

Urocyon

- Gato del Monte; Gato Cancel

An adult male specimen of this species was shot by me one night while following a cow trail through some dwarf like Jicaro trees. Its eyes flashed greenish some distance ahead of me. And when I passed quickly and lightly ahead the fox came toward me. The next minute I was within range and shot and killed him. Some natives seemed to think that this Gato del Monte caught and killed their chickens.

Rio San Miguel, 13°25'N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Hairy-tailed Rat —

I was able to represent this rare species from this locality by only one specimen, No. 11045. It was caught in a large snap trap baited with oatmeal and set on a horizontal limb in some brush with a few vines. However the ants were there before me and I had to make a skeleton of it.

Rio San Miguel, 13°25'N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Spiny pocket mouse -

The four specimens taken were caught in the old weedy bean patch near Rio San Miguel. The traps were set under the old dead bean vines and under dead weeds in the most likely places, here there was very little brush and green plants. No. 11070 was the only adult taken.

Rio San Miguel, 13°25'N. Dept., San Miguel
Feb., 2, 1926 – Feb., 21, 1926

Skunk – Zorillo

This species was found commonly in the Rio San Miguel region 13°25'N. No. 11053 was shot at night by one of our men. And skull No. 11072 was found in a careta trail that led through some jungle pasture land. No. 11087 was caught in a trap set in a bunch of tall green grass in the old weedy bean patch near Rio San Miguel. Metachirops No. 11075 was caught in the same trap. Under this grass I had six or seven large snap traps set for Sigmodon. I frequently found my specimens partly eaten when I would return in the morning. And it was for this reason that I made the steel trap set. When I made the set I baited it with a Grove-billed Ani but when the skunk was caught there were only a few feathers around. In the main cow trail that led through the old weedy bean patch near Rio San Miguel I set two No. 0 steel traps and [redacted] and baited them with a small Paraquite. Here I caught Nos. 11138, 11148, and 11173. The morning that No. 11148 was in the traps the familiar odour of a skunk came to my nostrils when I was climbing over the pole gate into the old bean patch.

Rio San Miguel, 13°25'N Feb., 2, 1926-Feb. 21, 1926

Skunk

When I came upon the scene there were two Barkars jumping frisky around the Skunk while two Black Vultures sat back and looked on. The captive was on defense with his tail [redacted], nearly parallel with his body, back over his head, and was panting heavily under the burning rays of the morning sun and the excitement which had been going on. As I approached the so called scavangers beat a hasty retreat. Although other sets were made in trails through the old bean patch this was the only successful place.
No. 11112♂ was shot by me at night in a melon patch near Rio San Miguel; this was just north of the old weedy bean patch. When I saw him♂ he was obviously feeding among the melon vines. However his stomach showed nothing. No. 11152 was found dead in the jungle at the edge of a corn patch.

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Blue-tailed Rat -

Blue-tailed Rats were apparently ~~was~~ rare in this locality since I had at least twenty five traps set for scansorial rats all the time. Three specimens were taken Nos. 11054 and 11114 and an immature that was eaten so badly by ants that I threw it away. These rats were caught on limbs of low trees in ~~the~~ heavy brush. Most of the leaves on the trees and ~~the~~ the brush were dead while we were at our Rio San Miguel station.

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1924 - Feb., 21, 1924

Oryzomys

Oryzomys were found commonly in the old weedy bean patch and in the tall green grass on the river bank of Rio San Miguel. As for Sigmodon, in the same places, snap traps baited with oatmeal were used, and set in likely spots under the heavy green grass and old dead bean vines. I saw Oryzomys occasionally in the wild pine apple hedges far out along the edges of dry fields sometimes as far as two miles from water. No. 110774 had what I thought to be Sigmodon hair in its stomach. The stomachs of others contained seed and plant pulp.

Rio San Miguel, 13°25'N. Dept., San Miguel
Feb., 2, 1926 – Feb., 21, 1926

Armodillo – Armodillo;

These mammals were frequently encountered at night, although their eyes never shone so I could spear them for some distance as they rambled about through the dead and fallen leaves searching for food. They favored wild pine apple hedges where the vegetation was so dense that it was impossible to locate them. Armodillos that I saw at night traveled along quite briskly with drooping head and tail only to stop suddenly and search about under dead leaves or root into a rotten log. They apparently pay no attention to a light and will come up quite close until they detect ones presence [redacted] by smell [redacted] then they dash off through the brush at a surprising pace. Stomach contents of specimens taken contained beetles, grubs, worms, thousand legged worms, spiders, etc.

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Nasua

- Cisole

Cisoles were spoken of as one of the commonest animals at this camp. I found their tracks sometimes abundantly in dusty cow trails that led through the pasture jungle. There also were Raccoon tracks but Cisole tracks could be differentiated in that their toes have a tendency to terminate close together while those of a Raccoon are usually more widely spread. No. 11059 was brought in by a native who encountered in a trail early one morning. He said that his dog killed it. One day a group of nearly a dozen were found in one tree by our native helper and he collected Nos. 11065, 11066, and 11067. He said they never attempted to escape but remained in the tree and peeked around the limbs at him.

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Raccoon - Mapachin

Raccoons were found commonly in the Rio San Miguel (13°25' N.) region where I encountered them at night with a carbide hunting lamp. Nos. 11063 & 11064 were shot in a lagoon at night by our assistant. He said they were in the water. No. 11077 was shot by me one night while I was hunting with a native guide. We were walking down an old dry lagoon when I flashed three pairs of eyes to our left in the edge of the brush. We squatted and remained quiet. Slowly the little animals came on with their noses near the ground. Their little black banded faces loomed up like those masked robbers. After they were within fifteen feet of us they attained a rather suspicious air and one even bristled up in a threatening manner. The bolder one came so close that I could have reached out and touched him with my gun. Presently they seemed to realize that they might be in danger and they started off down the dry lagoon. I fired at one but missed but a few

Raccoon

minutes later I knocked one out of a near by tree. No. 11078 was purchased from a native hunter. Nos. 11098, 11099, 11100 and 11101 were shot out of a tree at the edge of a lagoon. On this night we were following a pole fence around a shallow lagoon where thousands of little minnows kept the surface in a continuous movement at the surface where they were gapping for oxygen. As we started across a fallen and dead brush patch to the water's edge I flashed a pair of eyes in a tree at the edge of the lagoon. Another, another, another and another pair shone from the same tree. And we inched forward to get within range. We killed two Raccoons from the one tree and a Porcupine from a tree near by. One Raccoon jumped into the water and I heard him go splashing off through the waters of the lagoon. When I had picked up my two specimens from the water under the tree and started back to dry land I discovered the other two Raccoons in the main fork of the tree where we shot and killed them.

Jáguar-úndi →

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Herpailurus
Yagouaroundi — Gato Nutria

The one and only Gato Nutria added to my list at this camp, I found dead by a wild pine apple hedge not more than thirty feet from the waters of Rio San Miguel. The specimen was found on the opposite side of the hedge that bordered the old weedy bean patch on the south and along the edge of a melon patch. The cat was very lean. Its number is 11085. Natives at this locality frequently spoke of Gato Nutria.

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Sciurus
Variegated Squirrel; Gray-tailed Squirrel - Ardilla

The Variegated Squirrel was another mammal common to this locality. When hunting where there was trees or brush one might expect to see one at any time running up the trunk of a tree or through the branches. In the early morning or late evening while it was cool I found this animal to be the most active, and observed that while running my trap line I saw squirrels near where I had seen them the day before. No. 11088 crossed my path for three consecutive mornings at the same place. On the morning of February 15 I saw a group of eight in one tree chasing eachother up and down the branches and at times they were quite vociferous. They were probably breeding.

Rio San Miguel, 13°25'N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Dasyprocta

Agouti - Cotuza

Agoutis were not as common at Rio San Miguel (13°25'N) as they were at Cuello del Triunfo or at Mt. Cacaguatique. It was about eleven o'clock one morning that I entered a dense collol patch along an old dry lagoon about three quarters of a mile N.W. of our camp. The dead leaves were thick under these palms and I had'nt gone far when I heard a rustle! I stooped and got an occasional glimpse of an Agouti as it dashed through the shade of the palms spattered here and there by sun light. No. 11093 was said to have been killed in this bunch of collol palms. Early one morning while running my trap line I saw an Agouti dash out of a melon patch for the ~~dense~~ dence brush. A few minutes later I discovered that it had been eating a small melon which was partly ripe.

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Porcupine—

It was at this locality where I first encountered Porcupines at night with the carbide hunting lamp. A pair, No. 11096 & 11097 were shot from a horizontal limb on a tree which stood at the side of a canela trail which led through a dense and green patch of jungle toward an old lagoon. Their eyes shined faintly and they were walking along the limb, one close behind the other. On this same night, February 10, I shot another at the water's edge of the old lagoon it was climbing up a slanting limb when shot. However its skull was ruined and I didn't put it up. Another porcupine was brought into camp by a native but since its skull was crushed from the blow machete I refused to purchase it. All specimens examined from this locality were blacks.

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Saccopteryx

Two-lined Bat -

While hunting along an old dry lagoon with dense coltol palm thickets on either side, a little Two-lined bat flushed from the side of the trail and zig-zagged off through the palms. By examining the place closer I discovered a hollow tree or stump and killed No. 11108 while another escaped as the first had done. I frequently saw these little bats along this old dry lagoon trail; even during the middle of the day they would flash from the palms. I saw many Two-lined bats in large hollow tree in the dense coltol palms but was unable to get the ones shot since the fell down into the hollow. There were many mosquitos here and they didn't wait until night fall to feed. No. 11111 was shot by one of our men in dense jungle.

Rio San Miguel, 13°25' N. Dept, San Miguel
Feb., 9, 1926 - Feb., 21, 1926

Oryzomys

Ochraceous-rumped mouse-

Ochraceous-rumped mice were found to frequent places where other species of Oryzomys were found and also Sigmodon. No. 11110 was caught in a trap set under a wild pineapple hedge at the edge of the old weedy bean patch, and No. 11118 was caught in the old weedy bean patch. Nos. 11124, 11139, and 11164 were taken in traps set in the heavy grass on the bank of Rio San Miguel. Stomachs examined contained seed and plant pulp.

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1924 - Feb., 21, 1924

Least Bat -

Our camp was in a newly constructed mud hut which was arranged along with a series of others. The house or hut had three windows and one door, and the door was screened. The mosquitos commenced to come in through the open windows just as the sun sank behind the jungle and came in increasing numbers until dark when it seemed as though no more could get in. During the evening of February 14, we were taking our supper by lamp light, feeding ourselves with one hand and fighting mosquitos with the other, when I noticed a Least Bat wheeling about the room over our heads. I jumped up, grabbed a butterfly net, and after at least a dozen unsuccessful attempts I bagged No. 11123 a female. But this was not all another was spinning about the room and it finally came to rest on one of the pole rafters where it was shot with a shot pistol. It being No 11122 ♂. Both stomachs were full of insects finely ground.

Rio San Miguel, 13°25'N. Dept., San Miguel
Feb., 2, 1926 – Feb., 21, 1926

Mast. H Bat-

Many Mastiff Bats were seen, at Rio San Miguel 13°25'N, just a dusk as they ~~circled~~ chased ~~insects~~ insects propelled by sickle like wings. The speed of these bats as compared to others I have seen in flight is very fast. The two specimens taken 11149 ♂ (black) and 11150 ♀ (brown) were shot at the edge of a dense jungle over a melon patch. There were perhaps a dozen flying about at this place.

Rio San Miguel, 13°25' N. Dept, San Miguel
Feb. 2, 1926 - Feb., 21, 1926

Anteater - Perico Ligero

Although the natives frequently spoke of Perico Ligeros only one was taken at this camp. No. 11168 was shot by one of my boys in a tree full of dense vines at the edge of an old lagoon. He said it was asleep when he shot it. In the same tree was a Potos No. 11169. The animals were about fifty feet from the ground. This was a dry jungle pasture land with little green vegetation

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Potos

— Gato Leon; Gato de la Noche

This was supposedly a common species in this locality. However I succeeded in taking only one specimen, No. 111169, ♂ was found in the same tree with Anteater, No 111168, by one of my boys who shot the anteater and came back nearly two miles to camp and told me that there was another Perico Ligero in the tree but that he thought I wanted only one. We returned and found this Potos and he said it hadn't moved. It was in a tree full of vines in a dry pasture jungle.

Rio San Miguel, 13°25'N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Fringe-lipped Bat -

One day while hunting through some dry pasture jungle around the edge of an old lagoon I discovered a large hollow log perhaps five feet in diameter at the base. The next day I returned with ~~two~~ assistants and a large mosquito bed net to raid the place for bats. We arrived at the log just as it getting dusk and arranged our net at the opening making a bag to catch the bats. As I forgot to put water in my small carbide lamp I was forced to go into the log with a box of matches to light my way. For the first four or five feet I was able to proceed by stooping but soon had to drop to my knees. The bats were squeeking all about me and occasionally heavy wings would fan my face. It was impossible to light matches for ~~fluttering bats~~ ~~[illegible]~~ put them out as fast as I did so. On I went groping through the darkness on my hands and knees and as I gained the upper end of the hollow I could feel the heat from their bodies and the air was quite close. The hollow was now so small that my

Rio San Miguel, 13°25' N. Feb., 2, -21, 1926

Fringe-lipped Bats

body could pass no farther. I shoved, and threw pieces of rotten wood ahead and in a moment nearly all the bats had gone by me. I lit a match and saw only one or two ~~of them~~ bats so I turned to drive the others into the net. This was easily done as it was now growing dark fast out side. We carried them back to camp in the net while they squeeked and bit each other. In the morning when I made a close examination of the content of the net I found Fringe-lipped Bats and Brown Leaf-nosed Bats there. There were a few immature Brown Leaf-nosed Bats some of which were probably not more than a day old. One of these I found half eaten. The stomach content of the Fringe-lipped Bats ~~examined~~ was hair and flesh. One close examination I found the hair to compare almost exactly with that of the immature Brown ~~Leaf-nosed~~ Bats.

Rio San Miguel, 13°25' N. Dep't., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Brown Leaf-nosed Bats—

I found Brown Leaf-nosed Bats in a large hollow log at the edge of a lagoon in a dry pasture jungle. There were immature Brown Leaf-nosed Bats in the log some which looked to not be over a day old. Fringe-lipped Bats were taken from the same log, and in their stomachs I found what I thought to be hair and flesh of the immature Brown Leaf-nosed Bats. (See Fringe-lipped Bat Notes. Rio San Miguel 13°25' N.)

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 – Feb., 21, 1926

Rattus

Black Rat – Raton de la Casa

Black were found commonly in the natives huts.

Rio San Miguel, 13°25' N. Dept, San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Odocoiles

Deer- Venado

Deer tracks were common along the wates edge of the old lagoon south east of our camps. Our native hunters said the frequently saw them at night but I failed to shine one.

Rio San Miguel, 13°25'N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Conepatus.

A Conepatus was seen one night while we were hunting along a carreta trail which led through dense jungle to the old lagoon. However we failed to get a good shot at it.

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

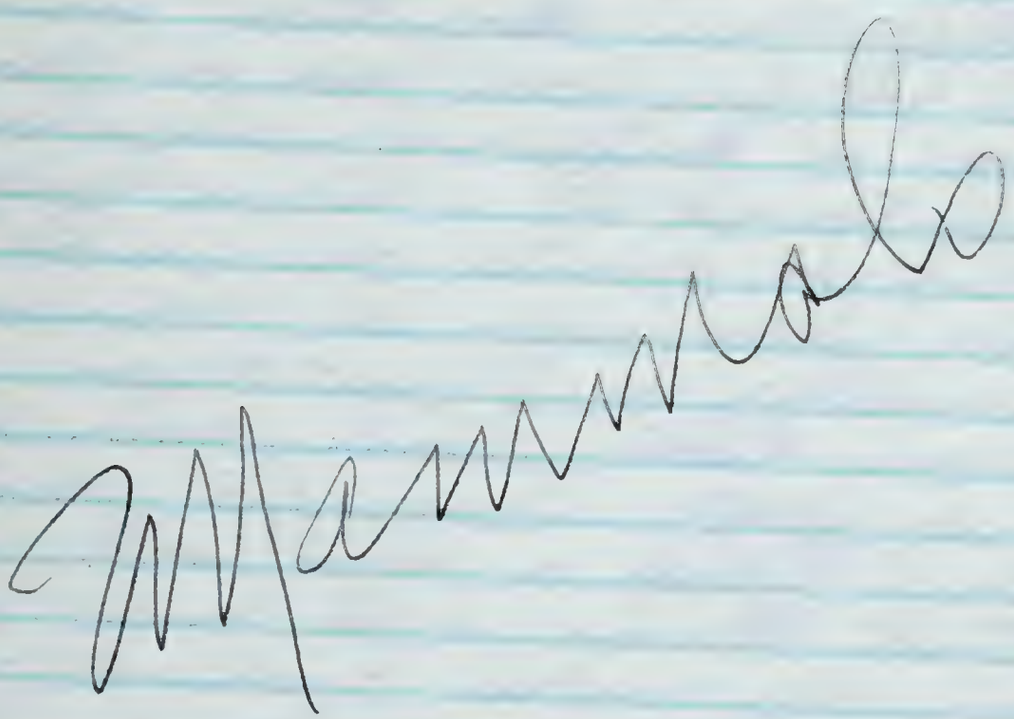
Coyote - Coyote

said to be common at this locality

Rio San Miguel, 13°25' N. Dept., San Miguel
Feb., 2, 1926 - Feb., 21, 1926

Otter —

Natives reported that otters were sometimes found in Rio San Miguel



Pine Peaks, Vol. Conchagua, Dept., La Union
February 26, 1996 – March 7, 1996

Early on the morning of February twenty-fourth we left La Union on our way up the Volcano Conchagua. mounted on small riding mules. At the outskirts of La Union we struck the sub-tropical zone with its apparently dead and dry vegetation and followed dusty and rocky trails that wound slowly upward. After perhaps an hour and a half's riding we came to a small thatched roof village where we asked for some drinking water and let our animals relax for a few minutes under the shade of a palm. We rode on under the ever increasing heat as the sun rose higher and higher. Occasionally we met natives along the trail; women with their burdens of grain, wood, or food stuffs, and men with their machetes or driving pack mules loaded with coffee. Another hour and a half brought us to the lower and main hacienda house of Don
Here we took lunch and rested.

At two P.M. we mounted our animals and

continued the journey. Approximately four hundred yards above the hacienda house we passed out of a dry grassy field into the cool green shade of the coffee belt. The coffee bushes were about eight feet high and not as thickly set out as we found them at M.T. Cacaguatique. Our trail wound in and out of rocky canyons and into dense shaded spots where it almost seemed dark. Thus we continued slowly along that zigzag trail up the north slope of the volcano and it was about four P.M. when we passed out of the last patch of small coffee into the grassy Toporan Zone on top.

Our quarters here is in a small room in a coffee store house in the Tonoran Zone at the edge of a pine grove and grass land. The pines, thick in some places and thinner in others, are about sixty to eighty feet in height and in some places the grove extends down the mountain slopes as much as one thousand feet. The ground under the trees is covered with a thick blanket of dead pine needles. These needles are so slippery under foot that one can hardly climb a slope where

they are found.

South and east of the little coffee store house is typical prairie grass land. A lava rock fence leads east along the volcano top from the pine grove. The grass is heavy to the north of this fence since no grazing has been done there. Under this grass one frequently finds Sigmodon hubs which look as though they were well used, also in the stone wall there are many good signs of small mammals. The stone wall extends about a half a mile to the east before it meets the coffee and other brush land.

The south mountain slope is grazing land where the grass is nipped so close to the ground that on some of the wind beaten knolls one sees only small round rocks and an occasional scrubby tree or bush which is bent to the ground from its many years of resistance to the N.E. wind. Along the protected slopes the brush is thick and about armpit high with grass growing sparcely at its base and many large lava rock boulders scattered here and there. Stock

trails make it possible for one to get through the brush and make sets for Sigmodon and Peromyscus, but ants are found here by the millions and unless one gets his trap shortly after the animal is caught the ants will have done their "dirty work". Under and about lava rock ledges are places here frequented by Procyon.

On some of the ravines on the south mountain slopes the sub-tropical zone up sometimes as far as 3300 feet. Here the trees are full of fresh green foliage but the cold rocky stream beds are dry and alive with ants.

The vegetation on the north slope changes near the mountain top from the sonoran grass to low brush which within a few feet becomes higher until it passes into the true sub-tropical zone or the upper extremity of the coffee. Along this upper ledge much young coffee is being planted and under large lava rocks boulders in the shade of big green trees Pine Peaks Peromyscus are common.

about three miles to the east of Pine Peaks is Vol. Conchagua proper with its low and dry vegetation and beyond the numerous islands in the bay of Fonseca, while off to the north is a rugged terrain of El Salvador and Honduras of characteristic of Central American countries.

Pine Peaks, Vol., Conchagua, Dept., La Union
Feb., 26, 1926 – March - 7, 1926

Peromyscus

Pine Peaks Peromyscus –

The Pine Peaks Peromyscus was by far the most common species found at this locality. Nos. 11196 and 11197 were caught under some large lava rock boulders in the pine grove where the dead and dry pine needles covered the ground in a heavy carpet. Many specimens were taken in a dry stream bed on the south mountain slope where strip of sub-tropical zone opened up with its green vegetation. The ants were so thick here that many of my specimens were nibbled. No. 11209 was caught at the edge of the pines in the coffee store house where we were staying. On the north mountain slope where the young coffee was growing and where the trees were large and green I found these Peromyscus abundant in the shade and under large lava rocks,

Pine Peaks, Vol., Conchagua, Dept., La Union
Feb., 26, 1996 - March - 7, 1996.

Peromyscus

Hairy-tailed Peromyscus -

This rare mouse was found in the grassy Sonoran zone in association with Sonoran Sigmodons. Because of millions of hungry ants I was able to take few skins. Nos. 11199, 11243, 11252, and 11254 were taken on the south mountain slope pasture land, where there were hundreds of large lava rocks in low dense brush. These specimens caught under lava rocks. No. 11260 was trapped on the top of one of the grassy knobs under a lava rock shade, and No. 11204 was taken in a similar place but under a stone wall.

Pine Peaks, Vol., Conchagua, Dept., La Union
Feb., 26, 1926 – March – 7, 1926

Blue tailed Rat.

As at many other localities I found the Blue-tailed Rat commonly here. Nos. 11204 and 11205 were caught in a dry rocky stream bed on the south mountain slope. Here I found them in association with Pine Peaks Peromyscus, in a strip of green sub-tropical zone. On the north mountain slope near the top and not far from the Sonoran zone I caught Nos. [redacted] 11217 and 11231 on a fallen tree which was held up by the brush and extended across a brush cleared path which marked the upper coffee limit. Near this spot shot on horizontal branches of other low trees I caught Nos. 11245 and 11258. No. 11218 was caught under rocks in a dry stream bed on the north mountain slope. Stomach contents consisted of seed-pulp, green leaf pulp, fruit pulp, and plant pulp.

Pine Peaks, Vol. Conchagua, Dept. La Union
Feb. 26, 1926 - March 7, 1926

Sciurus
Variegated Squirrel; Gray-tailed Squirrel - Ardilla

Variegated squirrels were not uncommon in the Pine Peaks and in the sub-tropical zone of Vol. Conchagua. During the early morning or late afternoon one could usually see them hurrying along a horizontal limb or jumping from one tree to another. No. 11210 was shot in the sub-tropical on the north mountain slope. No. 11229 was shot in the pine grove while eating a pine cone.

Pine Peaks, Vol. Conchagua, Dept., La Union
Feb., 26, 1926 - March - 7, 1926

spiny pocket mouse

Only four spiny pocket mice were taken by me at this locality. No. 112 14 a large adult female was caught along the upper edge of the north mountain slope by a hole in the bank of a small dry ravine. The hole was about two inches in diameter. 11216 was caught close by in a similar set. Nos. 11215 and 11244 were caught in a pile of dead ferns which had been piled up in clearing a path along the upper edge of the coffee. On one side of the path was Tropical zone and on the other was sub-tropical zone. In the pouches of No. 11214 were, seeds, old snail shell, and oat-meal flakes.

Pine Peaks, Vol. Conchagua, Dept., La Union
Feb., 26, 1926 - March-7, 1926

Mus

House mouse

No. 11230 The second House mouse I have seen in El Salvador was shot with a shot pistol in a coffee store house at the edge of the pine grove in the Honduran Zone. Frederick W. Taylor, Director General of Agriculture, caught several House mice in his room in the Hotel Nuevo Mundo in San Salvador. I examined one which he caught while I was in the city.

Pine Peaks, Vol. Conchagua, Dept. La Union
Feb., 26, 1986 - March - 7, 1986

Urocyon

- Gato Cancel

There were signs of this species being quite numerous on Vol. Conchagua for there were many faecal droppings on lava rocks and on a stone wall which wound over the mountain top. Many places I saw little freshly dug holes under rocks and in banks which I believe were done by this animal. [redacted] Late on the afternoon of March 5, 9 . was setting traps for Peromyscus and Sigmodon in the lava rock and brushy pasture land on the south mountain slope when following down a rocky ridge I saw a fox standing on a large lava rock perhaps one hundred and fifty yards below me. I watched it for a few minutes, while it was reaching for fruit in a palm tree, then I got behind the rock ridge where I crept down closer and to within range where I shot it with a 410 shotgun. This specimen is numbered 11256 in my serial.

Pine Peaks, Vol. Conchagua, Dept., La Union
Feb., 26, 1926 - March- 7, 1926

Mephitis

skunk — Zorrillo

The only specimen taken at this locality was No. 11957 which was shot in the pine grove at night. Its stomach contained insects.

Pine Peaks, Vol. Conchagua, Dept, La Union
Feb, 26, 1926 - March - 7, 1926

Spilogale
Tropical spotted skunk — Zorrillo

said to be found at this locality.

Pine Peaks, Vol. Conchagua, Dep't., La Union

Feb., 26, 1926 – March - 7, 1926

Conadeon

Porcupine - Zoro espins

A specimen was brought into camp by a moco who in capturing the animal had cut its head nearly into just back of the nacals and in front of the eyes. How the animal could live I do not know but it was alive. In color it equalled my darkest specimens.

Pine Peaks, Vol, Conchagua, Dept., La Union
Feb., 26, 1926 - March-7, 1926

Microsciurus

Native stated that this form was found in this locality, but they were probably refering to young Variegated Squirrels.

Pine Peaks, Vol. Conchagua, Dept., La Union
Feb., 26, 1926 - March-7, 1926

Mountain Lion - León

Reported by natives.

Pine Peaks, Vol. Conchagua, Dept., La Union
Feb, 26, 1926 - March - 7, 1926

Peccari

Said to be found along
the coast south of Vol. Conchagua.

Pine Peaks, Vol. Conchagua, Dept., La Union
Feb., 26, 1926 - March - 7, 1926

Procyon

– Mapachin

Mr. A. J. van Rossem saw a Raccoon one day while hunting in the sub-tropical zone on the north mountain slope, but was unable to shoot it before it escaped.

Pine Peaks, Vol., Conchagua, Dep't. La Union
Feb., 26, 1926 - March-7, 1926

Sigmodon

- Raton de Zacate

This species was found in the Sonoran grass land in this locality. Nos. 11196 and 11198 were taken in low dense dry grass on one of the highest points. Trails that appeared to be well used were found frequently under the grass, however at this time of the year the wind hits these higher and unprotected points so ~~[redacted]~~ my traps set in the runs failed to catch as many as I had figured they would. Nos. 11200, 11208 = 11,567 because of dup. in Serial, and 11267 were caught on the south slope of the volcano where there were many large lava rock boulders, dense low brush and ~~[redacted]~~ a small amount of grass. These three specimens were caught in traps set under large lava rocks. Nos. 11211 and 11247 were trapped in an old grass hut at the edge of the tall pine grove. There was some lumber piled in the hut and the traps were set under it. The others were taken in a small ~~[redacted]~~ bushy grass patch at the edge of the pines and coffee.

H 708 Stal(?)

Dr. Kuck

11'5